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ABSTRACT

The paper presents results of discussions during an 8-day workshop (Kuala Lumpur, Malaysia, December 1979) on monitoring and evaluation (M&E) of East Asian and Pacific rural development projects. Major workshop themes identified are managerial, technical, and institutional aspects of monitoring. The introduction discusses previous World Bank workshops on M&E and the format of this workshop. A second section, on managerial aspects of monitoring, covers the need for monitoring and expectations and disillusions about monitoring. The section on technical aspects discusses data collection, data processing and analysis, and presentation of monitoring results. Institutional aspects are divided into organizations, role of consultants, and staffing and other resource requirements. A table presents costs of 35 East Asian agriculture and rural development projects (1975-79), including cost of M&E and this cost as a percentage of base costs. A final section describes a workshop field exercise, intended to focus on design of M&E systems in a practical manner. Abstracts of case studies on M&E submitted by participants (36 project managers and M&E officers from 7 counties) are included in an appendix, as are lists of participants, papers submitted, and 35 selected references, and the text of the opening address. (MH)

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WORLD BANK

Staff Working Paper No. 439

October 1980

MONITORING RURAL DEVELOPMENT IN EAST ASIA

This paper presents the results of discussions during an eight-day workshop on monitoring and evaluation of rural development projects in East Asia and Pacific. Held in Kuala Lumpur in December 1979, the workshop was attended by over thirty project managers and monitoring/evaluation staff from seven countries, as well as members of the Bank staff and representatives of international agencies. The workshop provided a forum for exchange of ideas and field experiences.

Since most of the projects represented at the workshop are still under implementation, the discussions concentrated on the managerial, technical and institutional aspects of monitoring. Participants realized that, while there are no easy recipes for information systems which will provide quick feedback to management, a sharing of their individual experiences with different types of projects, under diverse environmental and cultural conditions, did offer insight into how the problem could be tackled. The contents of this paper deal with many of the issues confronting the designers of efficient monitoring systems, and are therefore of value to those concerned with promoting the cause of project specific monitoring and with improving project management.

The workshop discussions concentrated on the topics of expectations and disillusions about monitoring; data collection and analysis; presentation of results; staff and resources requirements; and the role of consultants and the use of external expertise for monitoring. The emphasis on these subjects complements the experience of an earlier workshop held in Nairobi for the field staff of rural development projects in East Africa, a report of which has since been published under the title of "Managing Information for Rural Development: Lessons from Eastern Africa" as World Bank Staff Working Paper No. 379.

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In the organization of the Workshop and in the preparation of this paper, the authors are deeply indebted to Ted Davis, Musa Ahmad, Michael Cernea, Nualnapa Buranavanichkit and Consuelo Carson. The editorial patience of Ella Wright is greatly appreciated.

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SUMMARY OF CONCLUSIONS AND WORKSHOP FINDINGS

A Regional Workshop on Monitoring and Evaluation of Rural Development Projects in East Asia and the Pacific was held in Kuala Lumpur, Malaysia, in December 1979. Participants were 36 project managers and monitoring/evaluation officers, who submitted 21 case studies on monitoring and evaluation of rural development projects in this region. The case studies provided the basis for the exchange and cross-fertilization of operational experiences. Abstracts of these studies are included in Annex IV of this report, and a selection of case studies by workshop participants is available in a separate publication.

Based on the experience conveyed in the case studies, three major themes were identified for the workshop sessions:

(1) the managerial aspects of monitoring,

(2) the technical aspects of monitoring, and

(3) the institutional aspects of monitoring.

This report synthesizes the conclusions and findings from the discussions held by the participants during the workshop. As a part of the workshop, a field exercise was conducted which involved the participants in the design of monitoring and evaluation subsystems for selected major project components of the Muda Irrigation Project in Malaysia. The final section of this report describes this practical experience.

Workshop participants realized that there are no ready-made recipes for information systems that will provide quick feedback to management from complex poverty-oriented rural development projects. However, well-designed projects with clear and specific objectives can be effectively monitored by means of relatively simple monitoring and evaluation systems that collect the

minimum amount of information based on carefully selected "key indicators." On the other hand, although information systems cannot be expected to compensate for poor project design and vague objectives, even in these less satisfactory situations, project-specific monitoring and evaluation can be a valuable tool for identifying problems of implementation and recommending solutions. Participants felt that "monitoring" was a tool for managers to assist them in what was termed "smooth" implementation and in reducing bottlenecks and problems that might arise. "Evaluation" was considered necessary primarily for noting the lessons learned from experience. Project-specific information systems are therefore required in rural development projects to determine what the benefits are and who receives them.

Some participants argued for more flexibility in project design so that project managers could modify operational plans according to the findings of ongoing evaluation. Others believed that this responsibility belongs to a hierarchy of decision makers, including project managers, policy planners, and higher authorities. Information derived through monitoring and evaluation should be directed through the appropriate institutional channels to higher levels of management. All decision makers involved in a project should take an active role in the design, development and execution of the monitoring and evaluation system. The technical standards should be sufficiently high to generate confidence and to provide information that is both timely and reliable for use in management decisions.

Based on their experiences, participants observed that information resulting from monitoring activities of rural development projects in East Asia and the Pacific is seldom used effectively. Such information is generally of low quality, too elaborate, long delayed, or irrelevant to the nee's of

project management. Resources available for monitoring are often inadequate to do the work efficiently. Furthermore, results from monitoring are poorly communicated to the project managers. As many project managers still lack an appreciation for the benefits that can be derived from effective use of feedback information produced through monitoring, few of them are highly committed to monitoring. In addition, it can be extremely difficult to communicate sensitive information to project management and to the responsible agencies in the Asian cultural context.

To avoid duplication of expensive monitoring efforts, information available from alternative sources should be integrated into the monitoring and evaluation system. The workshop participants urged that the first step in the design of any data collection exercise should be to identify a minimum set of indicators that satisfy the immediate needs of project managers. Appropriate design of the sample, proper construction of the questionnaire and adequate training and supervision of the enumerators are some of the means to both reduce costs and ensure quality. Delays in feedback to management can often be traced to the procedures for data processing and analysis. Data collection and analysis should not be overly ambitious and should be closely linked to project needs. The capacity for processing and analysis should be adequate for the data collected. Serious problems can arise because of lack of staff, skills and experience, processing equipment and analytical methodology. Clear identification of information requirements for different purposes at specific times is essential to assure timely processing and analysis of the data collected.

In the presentation of results, the workshop participants advocated the importance of brief, concise, specific, and action-oriented reports. The

output of the system should be relevant to the requirements of management. They also stressed the need to recognize who would be the end-users of the information.

The participants recommended that culturally acceptable channels of communication be identified to transmit sensitive monitoring and evaluation findings to project managers and higher authorities without compromising the substance of the conclusions. The effective use of the monitoring and/or evaluation results for improving project performance requires a significant degree of cooperation, commitment, and support by project managers and planners. Skepticism, suspicion, and defensiveness on the part of the authorities can make the monitoring and evaluation system completely ineffective.

As to organization, many participants felt that a two-tiered M&E system, consisting of a national-level unit which would be linked to smaller project-specific cells, may be the most efficient means of making optimal use of the scarce resources available for monitoring and evaluation. To overcome the critical shortage of skilled manpower for project-specific monitoring and evaluation -- a shortage which is prevalent in most of the countries in East Asia and the Pacific -- a number of projects may have to rely heavily for some length of time on external resources, such as local universities, research institutions, consultant firms or individual consultants. The participants, after discussing at length the trade-offs between building an in-house capacity versus the use of external inputs, concluded that training provided by consultants could be a benefit to institution building for the country concerned. Meanwhile, incentives and career prospects would have to be improved to attract the necessary caliber

of personnel for the tasks of monitoring and evaluation. The career structure of individuals should be viewed in a framework larger than that of a single project.

Although agreeing that most projects require some monitoring and evaluation activities, the participants noted that a significant proportion of the World Bank-assisted projects in East Asia and the Pacific do not contain cost and staff specifications for project-specific M&E. They therefore urged that the Bank give attention to making specific provisions for the M&E systems during project appraisal.

Currently, most rural development monitoring and evaluation systems for rural development projects are in their early stages of development in East Asia and the Pacific. According to participants, the serious difficulties experienced are mainly due to lack of detailed M&E design at the time of appraisal or lack of staff and funds for proper conduct of M&E. However, participants felt that monitoring, if properly conducted, was a valuable management tool for providing timely information on project progress and performance.

The tenor of the discussions and the summary of the findings at the Kuala Lumpur Workshop are broadly in agreement with the experience from previous workshops in Nairobi, Kenya and San Jose, Costa Rica. The exchange of experience and opinion at Kuala Lumpur was greatly expedited by the fact that the participants were almost exclusively either project managers or monitoring/evaluation officers who have to deal with the practical problems of implementing M&E systems.

During the field exercise, participants had an opportunity to design various monitoring and evaluation components for the ongoing Muda Agricultural Development Project. The results of the different working teams were discussed in detail in a plenary session. Their realistic proposals for M&E of the project components reflected partly the full cooperation of the field staff at Muda and partly the excellent briefing of the participants on the existing system. More significantly, their proposals demonstrated that the participants had a clear understanding of the functions of monitoring and evaluation and that they had benefited from the cross-fertilization of experience during the preceding sessions of the workshop.

In conclusion, the participants in the Kuala Lumpur Workshop were of the view that "project management would be deprived of indispensable information in the absence of an M&E system. Investment in M&E is, therefore, justified and should receive equal attention relative to the other project components." Furthermore, workshop participants felt that "investment in project monitoring and evaluation [would be] recovered many times over in terms of improved project performance."

SECTION I: INTRODUCTION

Poverty-oriented rural development projects are generally complex, containing several complementary components. For this type of project to be implemented successfully, a high standard of project management is required. Management information systems can make a valuable contribution to efficient implementation of such projects. Evaluation and review of projects can result in experience that will lead to improving the design and execution of follow-up projects of a similar nature.

To promote more effective implementation of rural development projects, the World Bank in 1979 started a series of Regional Workshops on Monitoring and Evaluation of Rural Development Projects. The main purposes of these workshops are to promote exchange of experiences and to pass on to others the lessons learned from design and implementation of monitoring and evaluation systems.

The first Regional Workshop on Monitoring and Evaluation was organized in April 1979, in Nairobi, by the World Bank's Agriculture and Rural Development Department, in collaboration with the Bank's East Africa Projects Department. A summary of the discussions and conclusions of that workshop can be found in "Managing Information for Rural Development: Lessons from Eastern Africa" by Guido Deboeck and Bill Kinsey (World Bank Staff Working Paper, no. 379, March 1980). A selection of the case studies presented at that workshop is available from the Agriculture and Rural Development Department. 1/

1/ G. Deboeck and D. Rubin (eds.). "Selected Case Studies on Monitoring and Evaluation of Rural Development Projects: Volume I: Eastern Africa," Agriculture and Rural Development Department, World Bank, 1980, 118 pages.

The Bank's Latin American Projects Department organized a similar workshop in San Jose, Costa Rica (in October 1979) on monitoring and evaluation of rural development projects in Latin America. A technical review of that workshop is available. 1/

In collaboration with the East Asia Projects Department, the Agriculture and Rural Development Department organized another Regional Workshop on Monitoring and Evaluation of Rural Development Projects in East Asia and the Pacific in December 1979 in Kuala Lumpur, Malaysia. The workshop was attended by 36 participants from seven countries: Fiji, Indonesia, Korea, Malaysia, Papua New Guinea, the Philippines, and Thailand. Among the participants were 19 project managers, 10 monitoring and evaluation officers, 5 national program officials, a representative from the Agriculture Development Council, a consultant, and 5 staff members of the Bank. 2/

The Regional Workshop on Monitoring and Evaluation of Rural Development Projects was officially opened by Datuk Arshad bin Ayub, Secretary General of the Ministry of Agriculture of Malaysia. In his opening address, the Secretary General emphasized the great significance and high priority that is given to monitoring and evaluation of rural development projects in Malaysia.

> "In Malaysia [we] realize the importance of a monitoring and evaluation system within the framework of the planned cycle. A special unit, the Implementation Coordination Unit, under the Prime Minister's Department has been given the task to undertake this. A computerized system has already been created to monitor and evaluate the development plans and projects for the whole country. The creation of the system is a turning point to institutionalize monitoring and

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1/ R. van Oven and K. Swanberg, "Workshop on Monitoring and Evaluation of Agricultural Projects: Overview," Latin American Projects Department, World Bank, March 1980.

2/ A complete list of the participants in this workshop can be found in Annex I.

evaluation as a component of the planning cycle in the development process. Within this overall framework, the Ministry of Agriculture is in the process of developing a monitoring and evaluation system for all its projects and is also introducing special M&E components in all new major projects to improve overall management." 1/

In preparation for this Regional Workshop all participants were invited to submit case studies on their experiences with monitoring and/or evaluation. Twenty-one case studies were submitted by the participants in advance of the workshop. A full list of these case studies can be found in Annex III, and abstracts of all case studies presented at the workshop appear in Annex IV. A selection of the case studies is available in a separate volume. 2/ A synthesis of the case studies, prepared by Ronald Ng, was provided at the start of the workshop for use by the participants.

The first four days of the workshop were devoted to a detailed review and discussion of monitoring and evaluation experiences; the remaining four days were taken up by a practical exercise, based on a field trip.

The Regional Workshop was organized around three broad aspects of monitoring and evaluation:

(1) The Managerial;

(2) The Technical; and

(3) The Institutional.

In view of the relative recency of most of the projects represented at the workshop, very few projects have yet attempted any form of ongoing evaluation.

1/ The full text of the opening address by Datuk Arshad is reproduced in Annex II.

2/ G. Deboeck and D. Rubin (eds.). "Selected Case Studies on Monitoring and Evaluation of Rural Development Projects: Volume II: East Asia and the Pacific," Agriculture and Rural Development Department, World Bank, 1980, 181 pages.

Only one of the case studies related to an ex-post evaluation experience. The monitoring aspects of management information systems therefore received correspondingly much more attention than either ongoing or ex-post evaluation. However, so far as possible, especially where the methodologies for monitoring and evaluation shared some features in common, the topics were discussed simultaneously.

Participants also engaged in workshop exercises that were designed to focus discussions on these three themes in small working groups. The results of the exercises and conclusions reached were presented by the workshop moderators to provoke debate on alternative issues within the themes. The results of discussions by the small working groups were summarized, with graphic presentations by the group rapporteurs at the end of the individual sessions. A synthesis of the opinions and conclusions on these themes can be found in Sections II, III and IV of this report.

In addition to these exercises and discussions, relating to elements of the broad themes, the design of a monitoring and evaluation system for a typical rural development project was undertaken by means of a field trip. Workshop participants were briefed on the Muda Irrigation Project by Mr. Jegatheesan, the senior official responsible for monitoring and evaluation of the project. Next, at the project site in Alor Star, participants -- accompanied by the technical staff of the project -- designed a monitoring and evaluation component for each of the five key areas of project operations: (i) irrigation water supply; (ii) agricultural credit; (iii) agricultural input supply; (iv) agricultural extension services; and (v) socioeconomic aspects of the project. The major results of this field exercise are presented in Section V of this report.

SECTION II: THE MANAGERIAL ASPECTS OF MONITORING

In the case studies submitted for the workshop, monitoring is recognized as an important management tool to provide timely information on the progress and problems of a project in the process of implementation. When it is based on several cases, monitoring should provide information on deviations from the project objectives, on problems that are encountered, and on ways in which project management can take remedial action promptly.

The issues relating to monitoring as a management tool were: (i) why project management needs monitoring; (ii) what support project managers expect; (iii) what information is required from monitoring; (iv) why some expectations are not met; and (v) why information produced by monitoring units is not used effectively. The deliberations on these issues at the workshop led to certain observations and conclusions that are summarized in the following two sections.

A. Why Should Projects Be Monitored?

Poverty-oriented rural development projects usually consist of multiple components, including directly productive investments, such as irrigation, agricultural credit, and extension, combined with investments in infrastructure and social services. Most projects discussed at the workshop were multi-component rural development projects, for which there are particular needs for monitoring.

The participants felt that the primary reasons for monitoring rural development projects were:

(1) to keep track of project progress;

(2) to provide feedback to project management on the achievement of project objectives;

(3) to serve as a "warning" mechanism for project management; and

(4) to help prevent or solve problems encountered during project implementation.

Thus, monitoring was seen by the workshop participants as a tool for managers, to assist them in what was called "smooth" implementation; to help them keep implementation on schedule; to provide for budget control; to measure physical achievements; and to reduce impediments and problems.

The rationale for monitoring is quite different from the rationale for undertaking evaluation of rural development projects. The workshop participants felt that evaluation of rural development projects was necessary to measure the effects and impact of projects. Evaluation, which consists of an analysis of the causes of success or failure of a project, is necessary to improve both the present progress and the future planning of rural development efforts. In short, participants felt that evaluation is needed primarily to note the lessons learned from experience.

The rationale for evaluation raised some interesting issues concerning the extent of flexibility currently built into rural development projects. Some participants felt that more flexibility should be incorporated in project designs and that project managers should have more authority to respond to the results from ongoing evaluations undertaken during project implementation. Greater flexibility could promote more effective implementation of rural development projects.

The nature and composition of rural development projects -- in particular the growing complexity of poverty-oriented projects -- was seen by the workshop participants as a major rationale for building an information system within project. Such an information system, which can consist of either monitoring or a combination of monitoring and evaluation, should primarily support the project manager. Other potential beneficiaries or users of the information system would be higher levels of management at regional and national levels as well as private organizations involved in the implementation of the project, planning and policy bodies, and external agencies. Information systems need to be included in rural development projects, particularly when an objective is to directly or indirectly benefit the poverty target groups. Without some special system it is virtually impossible to determine the benefits (i.e., project effects and impact) and who receives them.

B. Expectations and Disillusions about Monitoring

Following the discussion of the justification for monitoring, a very lively discussion emerged among the participants on the expectations from monitoring systems. Various working groups reported that project managers expect monitoring systems to produce information that is

(1) accurate;

(2) objective;

(3) reliable;

(4) relevant;

(5) timely; and

(6) action-oriented.

The most important of all features were considered to be the timeliness and relevance of the information for decision making.

It is therefore not surprising that many monitoring and evaluation systems do not meet these expectations. From a review of the experiences presented in the case studies, it appeared that information resulting from monitoring of rural development projects in East Asia has seldom been used effectively.

The workshop dealt at length with the major causes of this ineffective use of existing monitoring systems. The reports from the working groups indicated several reasons.

First, few project managers are highly committed to monitoring. Since some project managers had neither been involved in the design of the project nor in the design of its monitoring and evaluation component, they felt little commitment to it. Some of those who were committed had a poor relationship with the M&E staff. Others had serious doubts about the quality of the information presented by the monitoring unit.

Second, the monitoring system itself may be at fault. Information produced by the monitoring unit may be poor, too elaborate, or irrelevant to the needs of project management. Alternatively, the resources made available for monitoring may be inadequate. The products or results from monitoring may have been poorly communicated to the project manager. Experience of some participants was that monitoring results were presented with a "take it or leave it" attitude. Particularly sensitive information that is poorly communicated can raise questions as to the integrity of the project manager or of the agency involved in the implementation of the project.

Finally, workshop participants felt that ineffective use was being made of monitoring information because project managers often lacked the

necessary qualifications, authority, and power to reallocate resources during project implementation. In general, it was felt that project managers often lack a basic appreciation for the monitoring efforts and for the benefits that can be derived from more effective use of feedback on the project.

SECTION III: THE TECHNICAL ASPECTS OF MONITORING

In the discussion on why information on monitoring and evaluation has not been used effectively by project management, participants frequently referred to delays in supplying appropriate information to management. In this, the experience of East Asia and the Pacific has much in common with that of other regions. The delays that cause M&E to be ineffective can be traced to the lack of adequate manpower and financial resources allocated for the purpose and to deficiencies in the technical aspects. Data collection, processing, and analysis, as well as the reporting format, are discussed in this section, while the institutional aspects are considered in Section IV.

A. Data Collection

Several working groups referred to the problem of collecting too much information. Often information is collected in such detail that (a) it extends beyond the relevant needs of the project; (b) it exceeds the capacity of the staff or the available processing equipment; (c) it imposes intolerable demands on the beneficiary farmers; and (d) it duplicates information already available to project management. Participants realized that much more effort should be devoted to clearly identifying the specific objectives of rural development projects in order to arrive at a limited number of meaningful indicators that would facilitate decision making in relation to the project activities. The provision of staff for the purpose of data collection is an institutional issue that will be discussed in Section IV. The question of appropriate equipment for dealing with the collected data will be discussed in connection with data processing, as will the question of the relationship between the format of the questionnaire and the method of data processing.

Nonetheless, these are important design considerations. Data can be speedily processed only if the collection instrument is compatible with the method for processing the data. The use of cumbersome questionnaires may negate the goodwill and cooperation of the beneficiaries in providing the information necessary for efficient M&E of projects. There is also a great need for reviewing the information being obtained by other agencies. As much as possible, such regularly available information should be integrated into the system to avoid unnecessary duplications and inconveniences to the beneficiaries, as well as unnecessary cost.

The working groups urged the exploration of forms of data collection other than structured questionnaires. Possible methods include field observations, in-depth case studies, windscreen surveys, staff records, official diaries, and the like.

Most of the case studies describe sample surveys as the basic design for data gathering. However, little thought has so far been given to estimating sampling errors. Sample sizes are often chosen arbitrarily, without prior statistical analysis on means and variances of known parameters. The adequacy of relatively smaller sampling proportions in situations where the target population is either very large or fairly homogenous has not been sufficiently considered.

Nonsampling errors also occur when the interviewing procedure is designed by untrained staff. Reliability and quality of the data can further be compromised by inexperienced enumerators and lack of sufficient field supervision. Training of field staff has not been given enough attention, nor has the organization of M&E surveys provided adequate resources for effective

control and verification. These problems are manifest particularly in elaborate baseline surveys, where enumerators are hired temporarily to supplement the core staff. Lack of commitment to the exercise, and lack of familiarity with the purpose of the survey and the project, often result from limited budgetary resources. All these factors hinder efficient collection of reliable information from the field.

The use of supplementary information from reports by the participating agencies in multi-component projects is another problem area. Several of the case studies highlighted the difficulty of acquiring data and information from these sources in a timely manner.

The M&E staff in larger projects with extensive geographical coverage often have been assigned the additional function of collecting regional data not specifically relevant to project operations, without the provision of commensurate resources. In these cases, the meager resources for M&E are often exhausted, so that information gathering has little meaning for project implementation.

In the plenary session on data collection, participants recommended:

-- A limited set of indicators to satisfy the immediate needs of project management should be identified. Clearly, this would imply a thorough understanding of the project's objectives and goals. It is also imperative that the end-users, particularly the project manager, should be fully involved in evolving these indicators. It would also be helpful if some of the indicators paved the way for both ongoing and ex-post evaluations.

-- The designers of the M&E system should carefully review the range of information that is already being gathered to

avoid duplication of effort. To the extent possible, existing reporting channels should be examined, with a view to integrating these procedures into the M&E setting.

-- Data collection over extensive areas of fairly homogenous conditions could profitably be conducted on the basis of a random sample. The choice of sample size depends, however, on sound estimates of the variance in the population, based on professional advice and prior knowledge of the basic parameters. Quantity is often not a good substitute for quality. Where project effects can be readily seen, a relatively small sample may be sufficient to determine the impact of the project.

-- If a questionnaire is used, possible alienation of the respondent through time-consuming interviews or the soliciting of delicate information should be avoided. Persons with field experience in rural sociology could be very helpful in this respect. The format should facilitate data processing of the questionnaire.

-- Quality of the data can be assured only if the interviewers are given sufficient training. Personnel hired temporarily for data collection tend to be inexperienced and require more training than those who have performed similar duties in the past. In all cases, supervision must be provided, preferably by personnel of the M&E Unit.

-- Methods other than large-scale surveys to collect data need to be explored. The combination of several data collection techniques could often be advantageous. Formal and informal approaches, systematic and ad hoc studies, intensive interviews, surveys, and case studies are often compatible and can be used simultaneously.

B. Data Processing and Analysis

Participants generally agreed that the transforming of raw data into information is vital for effective monitoring and evaluation. Data that are not promptly processed cannot be used by management for decision making and therefore waste both effort and resources.

It was also recognized that processed data should be interpreted analytically to produce a basis on which to take management action. Although all participants agreed that the processes of data collection, processing, and analysis should be action-oriented, there was considerable disagreement on whether M&E should make specific recommendations for management action. Some participants thought that this might lessen the authority of the project manager, while others argued that recommendations for remedial action enhance the value of M&E as a management tool. This difference of opinion should not constitute a serious problem when the project manager takes an active role in all stages of the design, development and execution of M&E. The technical standards of M&E should be sufficiently high to generate information that is both timely and reliable for use in management decisions.

Problems relating to data processing and analysis as revealed in the case studies were discussed at length. Critical constraints that were identified were: limited staff, with relatively limited analytical skills and experience; inadequate data processing equipment; uncertainty of requirements; and lack of user confidence in the data base.

Important suggestions given by the participants to resolve these problems were the following:

-- The volume and format of data that need to be collected should be compatible with the capacity for data processing analysis, in terms of both manpower and equipment.

-- Short-term involvement of personnel external to the project might be required to overcome the shortage of experience and competence in interpretative analysis of data. In any case, training of data processing staff is essential to ensure effective M&E. (The issue of using external resources is discussed in more detail in Section IV of this report).

-- The selection of appropriate data processing equipment depends on the volume of data to be processed, the available time, the capacity of the staff, the accessibility to appropriate equipment, the operating environment, and the required analytical depth. The actual equipment could range from the traditional abacus to modern electronic data processing tools. Equipment that does not satisfy the demand for rapid analysis, for efficient storage, and for retrieval at a later date can cause considerable problems and reduce the effectiveness of the M&E system.

-- It is important to distinguish between requirements for monitoring and those for evaluation to improve future design of projects. Speed in presenting the findings is of the utmost importance in the area of monitoring so that remedial actions affecting project implementation can be undertaken on a timely basis. Identification of the end-products of various stages of data analysis is essential.

C. Presentation of Monitoring Results

Participants in the workshop recognized that there is an endemic failure to bridge the communication gap between M&E staff, project management, and higher-level decision makers and planners. Problems of report presentation and information flows can often be traced to voluminous reports with vast amounts of inadequately analyzed information. Salient findings and implications are often obscured by detail. The inability to present a succinct report of the changes in the project environment and the effects of project activities often arises from a lack of perception and understanding of the objectives and goals of the projects. To solve these problems, the participants advocated the importance of brief, concise, specific and action-oriented reports. The use of tables, charts or other forms of visual presentation of data can be very helpful in making the narrative more interesting.

In determining the content of the various reports, it may be helpful to recognize the types of users and their specific requirements for information. The output from monitoring and evaluation should be organized in such a way that advance reports precede the routine ones, in order to assure timeliness. In addition, ad hoc reports requested by management should be produced, if possible, from material that is efficiently stored.

SECTION IV: INSTITUTIONAL ASPECTS OF MONITORING

A. Organization of Monitoring and Evaluation

In discussing the lessons learned from national experiences in the East Asia and Pacific region, the participants recognized that the design of M&E Units should be adapted to the specific institutional and administrative framework of the country. In general, introduction of M&E as a new and formalized activity into an existing bureaucratic structure will be more effective if prevailing rules, norms, and social and cultural values of the established administrative system are taken into consideration.

All working groups emphasized that a high degree of sensitivity toward criticism and an entrenched respect for senority and age are implicit in most Asian cultures. These basic beliefs may intensify the cultural difficulties confronting project evaluators. Communication of sensitive evaluation findings to project managers, and especially upward through the organization, should be made within the local cultural context without compromising the substance of the conclusions. To achieve this, it was suggested that

(1) direct personal communication was more appropriate than public exposure;

(2) small group discussions were better than large meetings;

(3) self-evaluation of shortfalls should be encouraged;

(4) officials should be educated about the role of evaluators; and

(5) culturally appropriate channels need to be identified.

To ensure the effectiveness of monitoring and evaluation as an important management tool, project managers should recognize the contri-

bution that the system could make in improving management efficiency. Project designers, managers, and evaluation personnel strongly endorsed the view that project planners and managers should be involved in the design of the M&E system so that the function of M&E as a management and planning tool will be more fully appreciated and the output of the system will be more relevant to management needs. The feedback will therefore more readily be used in the decision-making process. Although project managers should not be expected to be conversant with the techniques of M&E, they should clearly see the symbiotic relationship between project management and M&E. In other words, project managers should be able to depend on the results of M&E as a sound basis for decision making, while the M&E unit should rely on project management for full cooperation as well as for logistic and institutional support. The effective use of the results from the M&E for improving project performance requires a significant degree of cooperation, commitment, and support by project management. Skepticism, suspicion, and defensiveness on the part of project managers can render the M&E system completely ineffective.

Both monitoring and evaluation should be of a broad technical or economic character and should assess and report on the reaction of the project beneficiaries to project inputs and activities. Evaluation should take into account not only objective limitations on the resources of the beneficiaries but also constraints derived from traditional patterns of subsistence, social organization, structure of authority, and other factors, such as religious beliefs and practices, that may hamper project implementation.

Monitoring should result in a diagnosis of problems and in an attempt to prescribe solutions and recommendations within the project

framework. The implementation of M&E findings is the responsibility of project managers, higher management levels or policy making bodies. There is usually a hierarchy of decision-making levels, and information derived from the M&E should be directed through the appropriate institutional channels to each level where action is required. In this manner, the question of the flexibility and the authority of the project manager prescibed by project design could be overcome. The feedback from M&E can provide project managers with a relatively limited scope for reallocation of resources and with the necessary evidence for requesting additional inputs or necessary policy changes from higher authorities to ensure effective project implementation.

M&E units can be area-specific or sector-specific. The model of the unit should vary according to the nature of the project and the subsector, such as irrigation, livestock, credit, extension, or fisheries, to which the project belongs. For optimal use of scarce human resources and skills, a two-tiered M&E system may be necessary for development projects. A two-tiered system consists of a central unit, well-staffed and well-equipped, linked to smaller project-specific units and supporting them with technical backup.

For rural development, individual components are often implemented by the field staff of different specialized agencies, in which case the project management performs essentially a coordinating role. In these instances, participants strongly recommended that the flows of information should be channeled to such agencies.

B. Role of Consultants

To overcome the critical shortage of skilled manpower for project-specific M&E -- a shortage that is prevalent in most of the countries in East Asia -- a number of projects rely on external resources, such as local

universities, consultant firms, or individual consultants for implementing M&E. The workshop participants discussed the trade-offs between the building of in-house expertise and the use of external experts. It was recognized that independent consultants can, in the short run, provide critical technical skills, as well as detached judgment and objectivity, particularly in more complicated and innovative types of projects. The freedom of such independent consultants from day-to-day operational involvement can have the advantage of furnishing project management with unbiased advice. Flexibility in the matching of consultants with the specific tasks to be performed is also an advantage. However, these benefits should be weighed against some disadvantages that are difficult to avoid. The sporadic and temporary involvement of consultants in the project is not conducive to the establishment of the necessary rapport between evaluation personnel and the project manager. In the case of contracts with universities, M&E may turn into academic research with slow feedback and little operational relevance to project management. Most workshop participants felt that, on balance, the building up of in-house M&E expertise may entail delays but is still preferable. This latter choice would not only provide vital continuity throughout the life of the project, but also give more direct feedback for management and planning at significantly lower costs, and could be viewed as an investment in the development of indigenous expertise. The benefits of the built-up expertise often outlast the project and can thus be considered as an "institution-building" effort for the country.

Given the critical shortage of expertise in many of the countries in the East Asia and Pacific region, participants acknowledged that consultants may play a role in the immediate future, especially in the design of the

systems for data collection, processing and analysis. Inputs to supplement and guide the project personnel in implementing the M&E system can be beneficial through transfer of skills.

The issue of establishing institutional safeguards for objectivity and creditability of in-house evaluation was also discussed, and possible solutions were suggested. The consensus was that M&E staff should be part of project management, but individuals should be able to pursue a career in a larger framework, independent of the project but dependent on the performance of the task assigned.

C. Staffing Requirements

Most participants emphasized the need for a multi-disciplinary team in the M&E units, combining economic, socioanthropological, and technical competence. During the discussion of the desirable characteristics of the monitoring and evaluation staff for the units, a workshop exercise was carried out to heighten the ability of project managers in selecting the appropriate personnel for the task and that of M&E candidates in presenting their potential contributions to management. The specific purpose of this role-playing exercise on "Interviewing Candidates for the Position of Monitoring/Evaluation Officer" was to extract from the participants the set of professional and ethical characteristics necessary for performing the function of M&E effectively.

Some of the desirable characteristics of monitoring and evaluation personnel that were identified through this exercise include:

-- training in economics and sociology and experience in field studies;

-- a high degree of sensitivity to the needs, values and ways of expression of rural people;
-- commitment and courage to signal shortfalls in project performance or other sensitive findings, even if risks are involved; and
-- awareness of the importance of the integrity and creditability of the evaluator's status.

The discussion also revealed that the incentives and career prospects that are usually offered have generally been inadequate to attract personnel of the necessary caliber for monitoring and evaluation. During the role-playing exercise, it was observed that some project managers could not express their own expectations for the M&E staff and could not describe the working environment. On the whole, all participants appreciated the opportunity of serious discussion of this human aspect of recruiting M&E staff of acceptable quality.

D. Other Resource Requirements

Participants at the workshop also exchanged ideas of specific provisions for M&E on the projects with which they were associated. Although most projects require some monitoring, it was noted that a significant proportion of World Bank-assisted agricultural and rural development projects in East Asia and the Pacific do not contain specific provisions for monitoring and evaluation. This observation on the part of the participants is further illustrated in Table 1, which lists all agriculture and rural development projects supported by the World Bank in East Asia and the Pacific over the past five years. Out of 64 projects, some 70% had references to monitoring and evaluation in their project appraisal reports. However, only 17 out of 45

projects with M&E contained specific resource provisions. The amounts allocated for M&E, as well as the percentages these represent in the total base costs of the projects, are also shown in the table. This analysis shows that 11 out of the 17 projects with specific provisions for M&E allocated less than 1% of the base project costs; 3 projects allocated between 1% and 2% of the base costs; and 3 projects allocated a range of 2% to 5% for monitoring and evaluation. The establishment and effective operation of M&E units is administratively more difficult, if not impossible, if specific provisions for M&E are not included in the project design.

MONITORING AND EVALUATION OF
AGRICULTURE AND RURAL DEVELOPMENT PROJECTS IN
EAST ASIA

FISCAL YEAR	COUNTRY	NAME	PROJECTS WITH M/E	COST OF M/E US$'000	TOTAL PROJECT COST US$ MIL	TOTAL BASE COSTS US$ MIL	M/E AS % OF BASE COSTS
75	AGRICULTURE						
	INDONESIA	AG RESEARCH & EXTENSION	0	0	46.5	30.50	0
	MALAYSIA	MARDI AGR. RESEARCH	1	100	108.6	72.80	0.1
	PHILIPPINES	TARLAC IRRIGATION	0	0	34.0	21.60	0
	RURAL DEVELOPMENT						
	INDONESIA	IRRIGATION VI	1	600	165.0	95.50	0.6
	MALAYSIA	KERATONG LAND SETTLEMENT	0	0	98.7	65.30	0
	PHILIPPINES	RURAL DEVELOPMENT	1	0	50.0	31.00	0
76	AGRICULTURE						
	FIJI	SUGAR DEVELOPMENT	1	0	26.0	18.50	0
	KOREA, REPUBLIC OF	LIVESTOCK II	0	0	24.5	17.50	0
		RURAL INFRASTRUCTURE	1	300	143.5	126.10	0.2
	PHILIPPINES	SECOND FISHERIES	0	0	23.5	17.60	0
		SECOND GRAIN PROCESSING	1	0	28.5	21.80	0
		SECOND LIVESTOCK	1	50	41.3	32.70	0.2
	THAILAND	IRR. VI-PHITSANULOK	1	0	210.0	121.80	0
		LIVESTOCK DEVELOPMENT	0	0	11.5	8.50	0
		RUBBER REPLANTING I	1	0	148.0	124.60	0
	RURAL DEVELOPMENT						
	INDONESIA	IRRIGATION VII	0	0	60.0	41.40	0
		NATIONAL FOODCROPS EXT.	1	0	44.2	33.10	0
	MALAYSIA	NORTH KELANTAN RURAL DEV.	0	0	48.0	31.70	0
	PHILIPPINES	CHICO IRRIGATION	1	900	84.0	53.20	1.7
		MAGAT MULTIPURP. STAGE I	0	0	84.0	51.80	0
	THAILAND	N E RURAL DEVELOPMENT	0	0	45.0	32.40	0
77	AGRICULTURE						
	KOREA, REPUBLIC OF	AGRIC. WATERSHED DEV. I	0	0	75.0	43.70	0
		AGRICULTURAL CREDIT II	0	0	41.2	32.30	0
		IRRIG. YONG SAN GANG II	0	0	167.0	97.80	0
	PHILIPPINES	AGRIC. CREDIT IV	1	100	91.3	80.30	0.1
	THAILAND	NATIONAL AGRIC. EXTENSION	1	400	56.5	42.60	0.9
		2ND CHAO PHYA IRRIG. IMPR.	1	200	112.0	76.40	0.3
	RURAL DEVELOPMENT						
	INDONESIA	IRRIGATION IX	0	0	64.0	44.10	0
		IRRIGATION VIII	1	0	118.0	76.50	0
		TRANSMIGRATION I	1	1700	56.8	41.00	4.1
	MALAYSIA	NATIONAL SMALL-SCALE IRR.	1	0	89.0	63.60	0
	PAPUA NEW GUINEA	AGRICULTURAL DEVT. IV	0	0	18.5	11.90	0

MONITORING AND EVALUATION OF
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EAST ASIA

FISCAL YEAR	COUNTRY	NAME	PROJECTS WITH M/E	COST OF M/E US$'000	TOTAL PROJECT COST US$ MIL	TOTAL BASE COSTS US$ MIL	M/E AS % OF BASE COSTS
77	RURAL DEVELOPMENT						
	PHILIPPINES	IRRIGATION V (NISIP I)	0	0	107.2	73.30	0
		JALAUR IRRIGATION	0	0	34.0	20.90	0
		RURAL DEVELOPMENT II	1	0	32.6	24.10	0
78	AGRICULTURE						
	INDONESIA	RURAL CREDIT I	1	500	60.0	43.50	1.1
	KOREA, REPUBLIC OF	OGSEO AREA DEVT. PROJECT	1	0	76.0	53.50	0
		RURAL INFRASTRUCTURE II	1	300	232.0	182.30	0.2
	RURAL DEVELOPMENT						
	INDONESIA	IRRIGATION X	1	0	216.0	131.00	0
		IRRIGATION XI	1	0	47.4	31.30	0
		NUCL. EST. & SMLHDRS. II	1	0	100.5	60.55	0
		NUCLEUS ESTATES & SMLHDR. I	1	1900	134.0	88.70	2.1
	LAO, P.D.R.	AGR.REHAB. & DEVT.	1	400	11.9	8.80	4.5
	MALAYSIA	LAND SETTLEMENT FELDA VI	1	0	92.3	66.90	0
		NATIONAL EXTENSION	1	0	46.5	33.10	0
		NW SELANGOR RURAL DEVT.	1	0	60.0	41.70	0
	PHILIPPINES	IRRIGATION MAGAT II	0	0	346.0	276.40	0
		IRRIGATION VII - NISIP II	1	900	140.0	93.90	1.0
		RURAL INFRASTRUCTURE I	1	0	59.0	43.20	0
		SMALLHOLDER TREEFARMING	1	0	16.0	12.90	0
79	AGRICULTURE						
	LAO, P.D.R.	AGR. REHAB. & DEVT. II	1	0	14.4	11.70	0
	PHILIPPINES	NATIONAL EXTENSION	1	400	70.1	55.95	0.7
	VIET NAM	IRRIGATION I	0	0	110.0	90.20	0
	RURAL DEVELOPMENT						
	INDONESIA	CIMANUK LOWER BASIN FLOOD CTL.	1	0	77.0	52.40	0
		IRRIGATION XII	1	0	118.5	82.70	0
		TRANSMIGRATION II	1	0	242.0	148.90	0
	MALAYSIA	KRIAN/SUNGEI MANIK IRRIG	1	0	60.2	43.90	0
		MUDA IRRIGATION II	1	200	69.0	52.00	0.4
		SMLHLDRS COCONUT DEVT.	1	0	44.2	32.80	0
	PAPUA NEW GUINEA	RURAL DEVELOPMENT I	1	0	32.2	25.40	0
	PHILIPPINES	MAGAT RIVER IRRIGATION	1	0	62.0	47.80	0
		SMALL FARMER DEVT.	1	0	37.0	32.60	0
	THAILAND	NE IRRIGATION II	1	0	80.0	56.40	0
		NORTHERN RURAL DEVT.	1	110	47.5	35.50	0.3
	TOTAL REGION		45	9060	5289.6	3713.90	

SECTION V: THE DESIGN OF MONITORING AND EVALUATION SYSTEMS: THE FIELD EXERCISE AT MUDA

During the working group and plenary sessions in Kuala Lumpur, the workshop participants had an opportunity to discuss in detail the various aspects of M&E and to share their specific experience in monitoring different kinds of rural development projects. A field exercise was therefore a logical follow-up of the working session in order to focus on the issues in a practical manner. The need for such an exercise was suggested by the participants at the workshop in Nairobi, and the field trip organized in connection with the San Jose workshop was highly appreciated by the participants.

The venue of the field exercise for the Kuala Lumpur Workshop was the Muda Irrigation Scheme 1/, located at Alor Star. The project is an

1/ The irrigation area, situated 500 km north of Kuala Lumpur, occupies a flat alluvial coastal plain about 20 km wide and 65 km long. There are 60,000 farm families in the area, with an average holding size of 1.6 ha, but about a third of the farms have less than 1.0 ha. These farmers are approximately equally divided into the three land tenurial status categories of owner-operators, tenants, and owner-tenants. The project aimed at providing the necessary infrastructure for introducing double-cropping over the service area, previously devoted to a single annual rice crop. Agricultural research and extension, as well as agricultural credit, received support. This first phase of development was a notable success, since it led to an increase in the cropping intensity from about 95% to almost 185% between 1969 and 1974. In constant preproject terms, farm incomes had doubled in the same period. Almost all of the income increases were accounted for by production increases as a result of adopting double cropping and of sowing high-yielding rice varieties. The completion report for the project was made much easier because of the monitoring and evaluation system included in the project design.

The Muda Scheme has recently been the recipient of a second loan from the World Bank to further improve the efficiency of the irrigation system through the provision of tertiary canals and other on-farm development measures. Apart from the planned improvements in infrastructure, which will lay the foundation for another major breakthrough in rice production and farm incomes, the second phase of the project includes a more intensive extension system, an improved credit system, an effective input suply system, and an improved operations and management system. The project also has provision for continuing the monitoring and evaluation system. The measurement of the secondary effects and impact of the project was the subject of a special FAO/World Bank Research Project ("The Muda Study: FAO/World Bank Cooperative Programme," Rome, September 1975, 2 volumes).

important Malaysian attempt to increase rice production in what originally was a very poor area of the country. The M&E activities at Muda are generally considered to be among the most successful, and Muda's experience has made a significant contribution to the advancement of project-specific M&E in the East Asia region. A number of reports on the results of monitoring and evaluation have been prepared. A detailed analysis of the impact of the Muda project has also been published. 1/ The Muda project was the subject of a special FAO/World Bank research project to measure the secondary effect and impact. 2/

The objective of the workshop field exercise was not the designing of a monitoring and evaluation system for the project per se, nor merely to observe the actual activities in Muda. The purpose of the exercise, given the limited time available, was to involve the participants in designing, as realistically as possible, practical M&E subsystems for the various project components. The results of these exercises were compared with the actual M&E system, so that the M&E staff of Muda could derive some benefits from alternative approaches suggested by the participants. With these possibilities in mind, the participants were reorganized into working teams according to their experience and expertise in monitoring and evaluating specialized types of rural development projects.

In preparation for the workshop field exercise, a detailed briefing on the Muda Project was given by S. Jegatheesan, Head of the Planning and Evaluation Division of the Muda Agricultural Development Authority (MADA). The working teams were then assigned the task of devising, as an exercise, a monitoring and evaluation system for the five key areas of project operations:

1/ See, for example, "The Green Revolution and the Muda Irrigation Scheme: An Analysis of its Impact on....The Distribution of Rice Farmer Income," by S. Jegatheesan, Office of the General Manager, Muda Agricultural Development Authority, 1977.

2/ "The Muda Study: FAO/World Bank Cooperative Programme," Rome, September 1975, 2 volumes.

(1) irrigation water supply;

(2) agricultural credit;

(3) agricultural input supply;

(4) agricultural extension services; and

(5) socioeconomic dimensions.

Although the monitoring and evaluation of the Muda project is a well-integrated system, it was expedient for the working teams to concentrate on the particular subsectors within the limited time available for the exercise. The intimate interrelationship among these subsectors was, however, stressed at the briefing, so that the participants could maintain this perspective during the design, field work, and post-exercise presentation session.

Each working team considered the project component that it studied as an integral project in itself -- identifying its objectives and targets, assessing it information needs, the quality of the existing reporting system, the need for additional monitoring information, and the data requirement for impact evaluation, designing data collection tools, and recommending an institutional model for a project-specific M&E Unit, with appropriate funding for staffing.

The Irrigation Water Supply Team identified the optimal utilization of the scarce water resources, particularly at the beginning of the growing season, as the objective of its component. The target is naturally the maximim degree of cropping intensity under an appropriate water supply schedule. The irrigation system is, to a large extent, controlled by the computer center, but accurate information on the agricultural activities throughout the service area is needed to compute the water requirements at various locations. The information from the field starts with the irrigation overseers and goes

through the irrigation inspectors to the district operations engineers. The summary of the data is communicated to the MADA management through a report on the performance of the irrigation plans and problems encountered, as a means of coordination with other cooperating agencies, such as rural credit, input, and extension agencies. The M&E model suggested by the working team was broadly similar to the system actually being used by the project, but the team had also identified some likely problems in the existing system of which project personnel should be aware. The discussions between the participants and the field staff had been very fruitful and mutually beneficial.

The Agricultural Credit Working Team saw as the objective for its component the provision of an adequate service of rural credit for promoting modern agriculture, with the social advantage of placing purchased inputs within reach of the poorer farmers. The target is to maximize the use of institutionalized credit in order to achieve both the technical goal of increased agricultural productivity and the social objective of equality in access to development opportunities, as well as to avoid exploitation of one section of the community by another. The team recognized the importance of making available the loan proceeds in close coordination with the stages in the cycle of agricultural activities, and therefore timeliness in the supply of rural credit was considered a critical indicator for management. Information on actual loan requirements for fertilizers, farm chemicals, land redemption, land purchase, and supplementary hired labor for plowing, transplanting, and harvesting is also useful for planning a project-wide supply of rural credit. Credit supervision would be carefully monitored to ensure efficiency and prevent unacceptable delinquencies. The participants felt that as loans for the MADA scheme cover only some types of credit, mainly for

paddy and tobacco cultivation and for purchase of farm equipment and machinery -- while other agencies provide loans for agribusiness, land purchase and redemption, estate development, fisheries, and cooperative development -- monitoring and evaluation had an important role to play in ensuring close cooperation and coordination among all the participating agencies. Drawing on the experience of their own countries, the team members had a valuable exchange of opinions with the staff of both MADA and the other operating agencies.

The Agricultural Input Supply Working Team considered the maximization (according to technical recommendations) of farm inputs and their supply through institutionalized channels as the primary objectives of its component. Members of the team reviewed the present supply of chemical fertilizers, farm chemicals, improved seeds, farm machinery, diesel fuel oil for farm equipment, and hired labor. The team then identified the information that would be required by project management to ensure adequate supply of these inputs on a timely basis. The importance of close cooperation with the credit institutions operating in the project area was recognized. The team then examined the existing reporting system critically, indicating areas where additional data would be required and suggesting the method for collecting such data. Suggestions were also made for designing appropriate data collection instruments and for relating them to data processing equipment and procedures. The team proposed a concise reporting format and discussed the possible uses of the information by project management. Staffing needs for monitoring and evaluating the input supply were also proposed.

Agricultural extension is an important link in the MADA strategy for achieving the goals of increasing cropping intensity and raising rice yields. The aim of this project component is therefore the promotion of modern farming

methods and farm inputs. To achieve this objective, the project is to install the training and visits system of agricultural extension as a means of accelerating the adoption of proven practices. If this approach is to be successful, it is essential to strengthen the agricultural extension service, improve the performance of the field staff, and coordinate with the supporting agencies in matters of input and credit supply. The target is the adoption of improved practices by 20,000 farm families cultivating 24,500 ha by 1983. Additional agricultural technicians and subject matter specialists will be recruited; vehicles will be purchased to increase the mobility of the field staff; equipment and buildings will be augmented. To monitor the progress of this component, the working team identified a range of indicators for the inputs into the system and the activities of the extension workers. The selection of contact farmers (an essential element in the training and visits system) and the training of the necessary agricultural technicians are other key areas in which information is needed by management. The working team also recommended that the reporting system should be more formalized, with further effort to verify the information supplied by the field staff. A sample survey by means of a structured questionnaire would form the basis for collecting information on the target population. For information that does not lend itself to regular reporting, ad hoc studies (for example, on the selection of contact farmers and the impact of training) could be useful. For evaluating the impact of the whole extension component, crop cutting surveys should also be considered. A more detailed questionnaire to be administered to a small sample would provide some of the information required for evaluation. The use of micro-computers to facilitate data entry and analysis was also considered advantageous. Monitoring would assist management in taking

day-to-day operational decisions; ongoing evaluation would provide for remedial action involving changes of project-specific objectives and strategies. Ex-post evaluation would provide the basis for planning future projects.

The Socioeconomic Working Team concentrated on evaluating the impact of the project in terms of increased income through better farm production by means of irrigation and institutionalized input supply and in terms of the equitable distribution of such income increases. The information required would include measurement of farm outputs, farm gate prices, and costs of labor and inputs, as well as subsidies and charges. The data would be derived from a sample of farmers representative of various tenurial groups and farm sizes. The team reviewed the existing data base and proposed that additional data be required. Apart from the survey questionnaire, the incorporation of supplementary and ancillary sources of information was also recommended. The team estimated the staffing needs and stressed the training of the enumerators. The installation of micro-computers and mini-computers for rapid data processing was considered. The team suggested external inputs to increase the depth and detail of analysis, discussed efficient use of the information by management, and considered an appropriate format for reporting.

During the field exercises, the participants were confronted, in a practical way, with typical questions that arise in the design and implementation of project-specific monitoring and evaluation systems. This practical experience enhanced the value of the regional workshop methodology.

In the workshop evaluation, participants were unanimous in endorsing the value of the field exercise and appreciative of the cooperation and hospitality of the host country in providing the opportunity of conducting field work in such a meaningful fashion.

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OPENING ADDRESS BY YB. DATUK ARSHAD BIN AYUB

SECRETARY GENERAL, MINISTRY OF AGRICULTURE, MALAYSIA

Chairman of the Organizing Committee, Distinguished Guests and Participants in the Regional Workshop, Ladies, and Gentlemen:

I would like to take this opportunity to thank the World Bank, and in particular the organizers of this workshop, for inviting me to make the opening address to this distinguished international group, which includes representatives from seven countries in East Asia. While it is an honor for me to be given this opportunity, it is an even greater honor for Malaysia to be chosen as the venue of this international workshop. On behalf of the Government of Malaysia, I welcome you to the conference and trust that your stay here will prove not only pleasant but fruitful.

The subject of this workshop -- the monitoring and evaluation of rural projects -- has great significance to all of us. For me, this particular subject is of high priority. The proper identification and the monitoring of developments projects is an important tool in policy formulation, program planning, and program management. It is appropriate that Malaysia was chosen as the venue for this workshop for we are in the midst of reviewing and appraising the performance of our development efforts during the Third Plan Period in preparation for selecting those programs and projects to be included in the Fourth Plan. Moreover, we are halfway through the New Economic Policy period. Right now we are evaluating the extent to which our policies have been successful in implementing our New Economic Policy goals to reduce poverty and to break the identification of race with vocation and location. But even more, we are not only interested in measuring progress but in understanding the causes of failure. That is the critical concern - to discover why policies and projects fail, so that we can change future programs to avoid these same pitfalls.

Over the past thirty years - the only period since the founding of the science of economics that attention has been paid to the process of economic development - our understanding of the process of economic growth has made considerable progress and has slowly become more sensitive, more subtle, more realistic, and more complex. This progress has not been without its shortcomings. The recent concern by development economists reveals but one blind spot in the past formulations of new insights into the development process. But when all is said and done, there is no doubt that our tool box for guiding and stimulating the growth process is infinitely richer today than it was in the 1950s. However, one area in which much progress has to be made is the field of monitoring and evaluation.

We in Malaysia realize the importance of a monitoring and evaluation system within the framework of the planning cycle. A special unit, the Implementation Coordination Unit, under the Prime Minister's Department, has been given the task of undertaking this. A computerized system has already been created to monitor and evaluate the development plans and projects for the whole country. The creation of the system is a turning point in institutionalizing monitoring and evaluation as a component of the planning cycle in the development process.

Within this overall framework, the Ministry of Agriculture is in the process of developing a monitoring and evaluation system for all of its projects and also is introducing special monitoring and evaluation components in all new major projects to improve overall management. This task would not be accomplished without the assistance from the advisers attached to the Ministry under the UNDP/World Bank Sponsored State and Rural Development Projects. I would, therefore, like to take this opportunity to record my appreciation to the UNDP group of advisers in the Ministry of Agriculture for their invaluable contributions.

I would now like to discuss with you some of the issues we experience in developing and utilizing monitoring and evaluation systems.

Firstly, monitoring and evaluation of specific projects is a rather new thing to most of us. The need for such a management function emerges for a number of reasons. We have seen many ambitious development projects fall short of the expectations we had for them. Why did it happen? We need more information on how small farmers behave and on their reasons for adopting or not adopting certain technologies the projects introduce. Development projects are also becoming increasingly complex, trying to reach poverty groups previously neglected. Development is a learning process; we need to get feedback on what works, what does not work, and how we can readjust our programs and strategies to become more effective in reaching small farmers. We need to know more about to what extent the benefits of the projects are reaching those we aim them for and to what extent the rural poor in reality see any changes in their incomes and standard of living.

The awareness of the importance of monitoring and evaluation systems is rapidly increasing within our countries. Not always is this, however, translated into allocating manpower and resources for this purpose.

In this context, we appreciate the initiative by the World Bank and other agencies to focus on these problems, their emphasis on monitoring and evaluation components in projects they are financing, and their stimulation of sharing of experience on the problems in workshops like this.

I think that the best means to convince planners and decision makers of the need to allocate time and resources to monitoring and evaluation is to demonstrate where such functions have provided substantial benefits to a project through examples I hope this workshop will highlight in the many case studies prepared.

Once we are convinced of the usefulness of monitoring and evaluation, the question arises: how to do it? - the key question of this workshop. Most of us are in an early learning stage of developing appropriate monitoring and evaluation systems. We need to learn more about systems for data collection and for data processing, means of reporting, the usefulness of various technical devices such as computers for information processing, how to strike a good balance between costs, amount of data collected, timing of data, the organizational set-up, etc. In short, we need to learn more about the technologies and the management of monitoring and evaluation.

I think our experience in Malaysia might be indicative for most of the countries participating in this workshop. We are happy to share the knowledge that we have with others. We should approach the development of the monitoring and evaluation system collectively. We have a long way to go until we have a satisfactory system to monitor and evaluate all development projects, especially rural development programs and projects.

One bottleneck in this process is shortage of experienced manpower. The number of officials with experience in this field is very few, thinly spread. I think this is a problem we share with most other developing countries. Another bottleneck is our limited knowledge about the technologies and the practical steps involved. I thus hope that the participants of this workshop will have sufficient time to look into the practical problems of monitoring ard evaluation.

The third question I would like to touch upon is what criteria we are applying to assess development efforts. Monitoring and evaluation systems should ideally cover a broad range of information, from financial records data to engineers' need to control progress in construction, agriculturalists' need for information on use of agrochemicals, credit, etc. - i.e., directly measurable tasks related to information, answering questions such as: Are the rural poor benefiting from the development efforts? Are they receiving the increases in income we expect? Do we achieve the changes in distribution of income and wealth we strive for? It is when we come to the latter types of questions that our difficulties begin. The means of collecting data is becoming more difficult, particularly if we want to go further than pure economic measurements.

In this context I would like to bring up the need to tailor monitoring and evaluation systems to the needs of the particular country where they are being utilized. Even though countries in the East Asia region share common objectives, they are at the same time at different levels and stages of development. Therefore, their strategies and policies to achieve their objectives vary. Take Malaysia, for example; the objective of the New Economic Policy is national unity through poverty eradication, irrespective of ethnic origin, and the restructuring of society so as to eliminate the identification of race with vocation and location. The indigenous population is targeted to acquire at least 30% of the national wealth. Hence, there is a need to develop socioeconomic indicators to constantly and periodically monitor progress on how income and wealth are distributed and to evaluate reasons for any discrepancies between targets and reality.

It is here that monitoring and evaluation systems come into their own. It is only through the feedback provided by these tools, and through the newly emerging branch of evaluation research, that we can fully understand how actual plans, programs and projects are implemented in reality.

Finally, my skepticism that we know enough about how plans, programs and projects will actually behave, as opposed to how they behave in studies, is best illustrated by quoting from a rather lengthy poem by Kenneth Boulding. He says, in part:

> The cost of building dams is always underestimated.
> There's erosion of the delta that the river has created,
> There's fertile soil below the dam that's likely to be looted,
> And the tangled mat of forest that has got to be uprooted.
>
> There's the breaking up of cultures with old haunts and habits loss,
> There's the education programme that just doesn't come across,
> And the wasted fruits of progress that are seldom much enjoyed
> By expelled subsistence farmers who are urban unemployed.
>
> For engineers, however good, are likely to be guilty
> Of quietly forgetting that a river can be silty,
> While the irrigation people too are frequently forgetting
> That water poured upon the land is likely to be wetting.

In brief - no matter how careful our analysis -- we always should take heed of the multiple effects of implementation. This is why monitoring is so critical - not to see that everything is done on time but to help us understand how plans, programs and projects really change the area in which they operate.

Let me conclude by saying that, despite my skepticism, I am a strong believer in proper selection techniques as the first step in the successful implementation and execution of a development strategy. I would not want to leave this conference hall before having made it very clear again that my full support lies behind those who wish to improve the planning cycle in our various countries. But to do so, the economists among us must recognize the shortcomings of the technique they so fully put forth and which, given its impressive strengths, still must be adopted and used with caution. Any evaluation system must be put forward in simple, plain, straightforward language so that technocrats, bureaucrats and, above all, the legislators fully understand what it tries to show and use it effectively in their daily work. In other words, any system so developed should not be a deterrent to successful implementation of development projects and shy people away from putting it into practice, but rather a facilitator.

I have been given to understand that you all have a busy schedule ahead of you for the next week. Nevertheless, avail yourselves of all the good things in this country; and with that I now officially declare this workshop open.

ANNEX III
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LIST OF PAPERS SUBMITTED TO THE REGIONAL WORKSHOP ON

MONITORING AND EVALUATION OF RURAL DEVELOPMENT PROJECTS IN EAST ASIA

Number	Name	Title
RWME/01/01	YOM In-Sop	A Case Study on the Monitoring and Evaluation System of the Integrated Agricultural Products Processing Project, Korea
RWME/01/02	CHOI Yong-Sang and YU Keun-Haak	A Case Study on the Monitoring and Evaluation System of the Kumgang-Pyungtack Agricultural Development Project, Korea
RWME/01/03	KOH Hyeon-Seok	A Case Study on the Monitoring and Evaluation System of the Agricultural Credit Project, Korea
RWME/01/04	SUNG Bai-Yung	A Case Study on the Evaluation of the Rural Electrification Project, Korea
RWME/01/05	BURESOVA, N.	The Reporting, Monitoring and Evaluation System of the Fiji Sugar Development Project
RWME/01/06	SINGH, R. K.	A Case Study on the Monitoring and Evaluation System of the Seaqaqa Sugar Development Project, Fiji
RWME/01/07	NUNEZ, J. P.	A Case Study on Monitoring and Evaluation in the Rural Development-Land Settlement Project, The Philippines
RWME/01/08	PASTOR, P.A.	A Case Study on the Monitoring and Evaluation System of the Capiz Settlement Project, The Philippines
RWME/01/09	TIANGCO, W. S.	A Case Study on the Operation, Monitoring, and Evaluation System of the UPRIIS Project, The Philippines
RWME/01/10	DE GUZMAN, R. N.	The Input-Output Monitoring Program for the Upper Pampanga River Integrated Irrigation Systems (UPRIIS), The Philippines

Number	Name	Title
RWME/01/11	SONGCO, M. M.	A Case Study on the Monitoring and Evaluation System for the Livestock and Poultry Project of the Development Bank of the Philippines
RWME/01/12	RENTUTAR, F. G.	A Philippine Experience on an Agricultural Extension Reporting, Monitoring and Evaluation System
RP.E/01/13	MAGPALE, L. J.	A Case Study on the Philippine Fourth CB-IBRD Rural Credit Project: Monitoring and Evaluation Aspects
RWME/01/14	DIZON, C. S.	A Proposed Monitoring and Evaluation System for the Rainfed Agriculture Project I (Iloilo), The Philippines
RWME/01/15	PERLAS, A.	A Proposal for the Design of an Evaluation System for the Second IBRD Rural Development Project in the Philippines
RWME/01/16	CHIRAPANDA, S.	A Case Study on the Monitoring and Evaluation System for the Agricultural Land Reform Program of Thailand
RWME/01/17	KRISHNAMRA, J.	A Report on the Monitoring of the Phitsanulok Irrigation Project, Thailand
RWME/01/18	BIN JAAFAR, Z.	A Case Study on the Monitoring and Evaluation of the North Kelantan Rural Development Project, Malaysia
RWME/01/19	CHAN, A. K.	A Preliminary Proposal for a Monitoring and Evaluation System for the National Extension Project in Malaysia
RWME/01/20	SAMIRIN	A Case Study on Monitoring and Evaluation in the Yogyakarta Rural Development Project, Indonesia
RWME/01/21	WALLIS, J.	Aspects of Monitoring and Evaluation of the Southern Highlands Project, Papua New Guinea

ABSTRACTS OF CASE STUDIES

A Case Study on the Monitoring and Evaluation System of the Integrated Agricultural Products Processing Project, Korea

Yom In-Sop

THE PROJECT

The project aims to increase the income of 5,000 poor farmers in the southern part of Korea through modernization of cultivation and processing of agricultural products. The project is for five years (1975-79), with a total cost of US$20 million, of which US$13 million is funded by the World Bank.

The Project Manager is responsible to the Vice-President of the Agricultural and Fishery Development Corporation. He has a staff of 20 members in three Divisions: Technical, Marketing and Appraisal.

REPORTING, MONITORING, AND EVALUATION

The major objectives of the reporting, monitoring, and evaluation system are: (1) to supervise ongoing subprojects; (2) to determine the project's impact on farm income, creation of rural employment, and increase in export earnings; and (3) to assist in the preparation of follow-up projects.

The cost of operating the system is approximately 0.1% of total project costs. The performance of the project is measured by comparing the expected and the actual figures for yields, incremental production, number of farmers benefited, incremental income, exports, and the financial rate of return. These indicators were identified with reference to the inputs, activities, and goals of the project. The selection of indicators aims at satisfying the needs of the Technical and Marketing Divisions at the project level, as well as the information needs at the ministerial level.

Information required before project commencement included production capacity, level of production, availability of raw materials, labor force, managerial and technical staff, markets, and financial status of the prospective target groups.

Monthly progress reports on both the processing and on-farm development subprojects are prepared; repayment performance records are provided quarterly. The annual reports cover such topics as total production, inventory, sales, employment, capacity utilization, and profits. Any substantial changes in collaterals, replacement of facilities, relocation of sites, and transfer of ownership are reported as they occur.

The information has been used on a regular basis by management for determining future investment needs. Repayment performance information is used for making decisions with regard to legal procedures for debt recovery.

Information regarding sales and profits is usually understated, just as production costs are overstated for tax reasons. Information from sub-borrowers is sometimes lacking, due to their unwillingness to cooperate and to the complexity of the original questionnaire (which has subsequently been simplified).

The activities of the system consist of collecting information from (1) processor sub-borrowers, using mailed questionnaires, and (2) farmers in the development subprojects, through interviews by the field extension staff, and (3) processing and analyzing the data.

One of the most important findings revealed by the monitoring system was that many of the sub-borrowers had expanded their productive capacity beyond the original loan request, or had added new lines of enterprises, resulting in serious shortage of working capital. The unit had accordingly recommended that project management provide additional working capital for them.

A Case Study on the Monitoring and Evaluation System of the Kumgang-Pyungtack Agricultural Development Project, Korea

Choi Yong-Sang and Yu Kuen-Haak

THE PROJECT

This is the first large-scale integrated agricultural development project in Korea. The project began in 1970 and was completed in Kumgang in 1976 and in Pyungtack in 1977.

The objectives of the project were (1) to rearrange the production basis of 31,000 ha through improvements in irrigation and drainage, land consolidation, land reclamation, and farm road realignment; (2) to accelerate rural modernization by means of raising the farm income through increasing the level of agricultural support services; and (3) to lead effectively similar large-scale agricultural development projects in the future.

During project implementation, 9,500 people were employed and 87.5% of the 32,000 farm households in the area received some benefit from farm development activities.

The original cost estimates amounted to US$100 million but the completion costs escalated to twice the total owing to inflation and other reasons.

To operate and maintain the project effectively, the Ministry of Agriculture and Fisheries established a Division of Special Area Development and a Kumgang-Pyungtack Project Area Department was instituted in the main office of the Agricultural Development Corporation. Management field offices were also established in each project area, and several supervising offices were subordinated to the management field offices.

REPORTING, MONITORING, AND EVALUATION

The aim of the reporting, monitoring and evaluation was to provide accurate and timely information collected from actual project achievement to project management and a rapid delivery of management decisions to the farmers.

The organization for reporting, monitoring and evaluation was changed several times during the lifespan of the project to adjust to variable circumstances.

Three main types of information were collected by the unit. The first consisted of administrative reports and the second was reference materials relevant to project development collected from external sources. The

third--and by for the most important--was the information concerning project implementation collected through field surveys and farmer interviews. Much of the information need was identified by the requirements of the World Bank and the Ministry of Agriculture and Fisheries. These included soil surveys, cropping pattern surveys, farm household economic surveys, crop yield surveys, agricultural supply surveys, farmer organization surveys, and crop status surveys.

The frequencies of these surveys depended upon the situation each year. The Agricultural Development Corporation and each management field office had qualified manpower to take care of the surveys, and the amount of manpower available was dependent on the size and condition of the subprojects.

Owing to the shortage of funds and manpower, information for a complete evaluation of the project was lacking. Materials available were used mainly to set up a long-term program for agricultural development in the country and for short-term annual planning of the project.

As a result of the information collected, modifications were introduced in respect of changing the land utilization ratio and increasing the target yield. The project, however, was subject to substantial modifications because of overall government policy changes.

A Case Study on the Monitoring and Evaluation System of the Agricultural Credit Project, Korea

Koh Hyeon-Seok

THE PROJECT

This project is a continuation and expansion of the First Agricultural Credit Project, completed in 1976. The aim is to provide medium-term and long-term loans through the Participating Gun (County) Agricultural Cooperatives (PGCs) to about 8,000 farmers for investments in apple orchard development, sprinkler irrigation, on-farm storage of fruits, greenhouses for vegetables, and silkworm-rearing houses. It is envisaged that, through this development, there will be stabilized farming and marketing, as well as increased production at lower costs, which will ultimately increase farm income while meeting domestic and export demands for fruits, winter vegetables, and cocoons.

This project, begun in 1977 and to be completed in 1980, will cost US$41.3 million, of which US$20.0 million will be financed by the World Bank.

The National Agricultural Cooperative Federation (NACF) is responsible for coordination of the project. Project management is subordinated to the Technical Unit for the Agricultural Credit Project (TU) and has eight supporting sections. At the provincial level, the General Managers of the Provincial Branches of the NACF have charge over the PGCs, whose workers in the field are the Loan Appraisal Officers (LAOs).

MONITORING AND EVALUATION

The major activity of the Technical Unit for Project Monitoring and Evaluation is the preparation of the annual Project Implementation Plan. These plans are based on information collected from the PGCs regarding loan demands, as well as information on government development policies, taking into consideration the availability of project funds and project implementation procedures. A difficulty in the formulation of these plans is the danger of overlapping with other government projects which are implemented by different agencies with their own monitoring and evaluation systems.

Implicit in the preparation of the annual References and Criteria for Loan Appraisal for each of the subprojects, another function of the TU, is a cost effectiveness analysis, which takes into account the changing prices of inputs and outputs and the changing farm technology. This involves the use of statistical and reference materials, as well as intensive on-farm surveys undertaken by the TU staff, which give a realistic impression of project progress and implementation problems.

The main source of information for the monitoring and evaluation system is the documentation and reports of the PGCs. These are then collected,

cross-checked and analyzed by the central TU staff. Twice monthly, information on loans made and funds needed is transmitted to the TU by telephone or telex, for checking on progress in general; more complete information is mailed every month to the TU for detailed checking. Owing to delays caused by manual processing, the information often arrives too late for action to be taken. Furthermore, some PGCs have been unwilling to supply the required information and have continued to use an older reporting system. Data processing by electronic means has been instituted in some pilot areas. Field trips are occasionally undertaken by TU staff to acquire information on the quality of PGCs in implementing the project.

Ex-post evaluation will require information on trends of project loans, farm management performance, institutional efficiency, and general agricultural change. This information is being gathered by the LAOs and summarized in the PGC annual review. On completion of the project, a sample survey, with a carefully designed questionnaire, will be undertaken.

A Case Study on the Evaluation of the Rural Electrification Project, Korea

Sung Bai-Yung

THE PROJECT

The Rural Electrification Project formed part of the Rural Infrastructural Development Project (1976-78) in Korea, within the framework of the Saemaul Undong (New Community Movement). The total cost of the project as a whole was US$167 million, of which 35% was financed by a World Bank loan.

The Economic Planning Board (EPB) was the agency for monitoring the progress of the various project components implemented by different technical agencies. Quarterly reports from the executing agencies of each subproject on the physical status and the expenditure were forwarded to the EPB. The Project Monitory Unit of the EPB checked the reports for their financial consistency and prepared a summary of overall performance.

The EPB was also responsible for the ex-post evaluation of the project, and in consultation with the World Bank and the Korean Rural Economics Institute (KREI), drew up a three-year program of evaluation studies. Study teams from KREI undertook evaluation of each of the project components, including rural electrification.

The Korea Electricity Company (KECO), under the supervision of the Ministry of Energy and Resource, was responsible for the survey, design, operation, and maintenance aspects of the rural electrification component. The areas to be electrified were selected by the local government.

The total cost of US$55.9 million was provided by a combination of a Bank loan through the government (77%), KECO's own investments (11%) and consumers' contributions (12%). Loan repayments were collected by the KECO.

PROJECT EVALUATION

The purposes of evaluation of the Rural Electrification Project were (1) to measure the cost-benefit of electrification; (2) to analyze the technical and operational problems of project implementation; (3) to measure the improvement in the quality of rural life and changing attitude toward the project; and (4) to analyze the impact of electrification on the rural economy.

A sample survey of 200 rural households, half of which were electrified during an early phase in 1970-75 and the other half during 1976-77, was conducted. Forty village leaders were also interviewed. In addition, a mail survey was conducted for KECO branch offices on the technical and operational

problems. Local government offices concerned were either interviewed or surveyed by mailed questionnaire for information on regional problems relating to implementation of, and further plans for, rural electrification.

Analysis of project feasibility and the internal rate of return was carried out by two alternatives: (1) economic benefits of cost savings, time savings, productivity gains, and material savings; and (2) actual payments and consumer surplus. The cost streams included investment, energy supply, and consumers' costs, as well as indirect costs and social costs. The internal rates of return for the two alternatives were calculated to be 44.26% and 14.20%, respectively.

It is concluded that the reporting and monitoring of the project, undertaken by the executing, planning, and budget authorities, and the evaluation, undertaken by an independent research institute under harmonic coordination and support from the implementing agencies, appear to be very effective.

The Reporting, Monitoring and Evaluation System of the Fiji Sugar Development Project

Nemani Buresova

THE PROJECT

The project aim is to increase the sugar production of Fiji by 400,000 tons over a period of five years beginning in 1976, through the clearance of 8,000 acres of rolling scrub and forest land and the rehabilitation of another 26,000 acres affected by sea water intrusion and water-logging conditions. It has several components, including tramline extension, road construction and maintenance, seawall reconstruction, land clearance and drainage improvement, to be implemented by different technical agencies.

The total project cost is US$26 million, of which 46%, representing the foreign exchange costs, will be financed by a World Bank loan.

The two subprojects of the Seaqaqa Sugar Development Project and the Drainage Improvement Project are under the overall direction of the Permanent Secretary for Agriculture and Fisheries. A project manager, appointed by, and reporting to, the Permanent Secretary in his capacity as Chairman of the Central Coordinating Committee, would be responsible for the Seaqaqa land settlement; the Public Works Department would be responsible for the construction and maintenance of project roads; and the Drainage and Irrigation Division and the local Drainage Boards would be responsible for drainage improvement.

REPORTING, MONITORING, AND EVALUATION

The Economics, Planning, and Statistics Division is charged with the responsibility of conducting the reporting, monitoring and evaluation activities, for and on behalf of the Permanent Secretary for Agriculture and Fisheries. This responsibility is directed toward coordinating, analyzing, reporting, and evaluating aspects of the project's progress, such as the rates of land clearance and farm development, deployment of farm advisers, progress of drainage improvement, yield progression, farm incomes, loan repayments, and drainage levy collections. The Division works closely with the Fiji Sugar Corporation, which routinely collects most of the data that are supplied to the Division for analysis, recording, and information.

As several agencies and ministries are involved in the implementation of the project, specific information directly related to each has to be obtained, analyzed, integrated, and agreed upon before project components can be implemented.

The information available on a monthly basis is the activities closely associated with the Seaqaqa Settlement Project. Quarterly information is acquired from the agencies and ministries involved. The information

required for the annual reports tends toward analytical information, such as the comparison between estimated and actual expenditures, volume and value of agricultural production, inputs and costs of agricultural production, and the farm budgets for a typical 15-acre farm at Seaqaqa and one of the same size in the drainage improvement area. The prices of agricultural inputs are also presented.

Problems with the information system seem to be related to those parts pertaining to other agencies and ministries rather than to the Seaqaqa Settlement. Late arrival of the necessary information from these sources and personnel changes in these agencies are some of the problems confronting the system. Informal systems are used in discussions with the reporting officers from the agencies and ministries, including consultations over the telephone with, and obtaining viewpoints from, the various agencies and ministries about a project component first before decisions are made.

The system has done little to monitor and evaluate the socioeconomic changes, especially when farm incomes have risen faster than expected.

A Case Study on the Monitoring and Evaluation System of the Seaqaqa Sugar Development Project, Fiji

Ram Karan Singh

THE PROJECT

The project is a component of the Fiji Sugar Development Project. It is concerned mainly with the Seaqaqa Settlement. The project entails the clearing and development of some 12,000 acres of land to enable it to produce about 200,000 tons of cane by 1980 and the settling of some 800 farmers, each planting about 40 acres of crops, of which about 15 acres are for sugar.

While the Ministry of Agriculture and Fisheries is responsible for the project and manages it through a project manager, several of the organizations are responsible for different areas of input. The project manager controls and coordinates all project activities, including land subdivisions, land surveys, land clearing, cane development, road construction, and social services in the settlement area.

The five-year project is expected to cost about US$16.0 million, funded by the Fiji Government, the World Bank, the Fiji Development Bank, and the Fiji Sugar Corporation. Funds are on-lent to individual settlers for on-farm development on a 15-year term at subsidized interest rates.

REPORTING, MONITORING, AND EVALUATION SYSTEM

The project is a very ambitious one. The problems associated with it are manifold and varied. The success of the project depends to a large extent on the management's ability to keep to schedule, to remain within budget limits, and to forestall problems and difficulties by taking remedial actions without delay. The system is therefore designed to monitor progress in these important areas, provide comparisons with the estimates, and highlight deviations.

A Monitoring Unit has been set up in the Economics, Planning, and Statistics Division of the Ministry of Agriculture and Fisheries, headed by the Chief Economist, who reports directly to the Permanent Secretary. Each organization involved with the project implementation is responsible for the data and for reporting on its own areas of involvement and for supplying these data to the central Monitoring Unit at regular intervals. The reports compiled by the unit endeavor to highlight important areas, such as actual expenditure against estimates and work completed against time expiration. For its own management functions, the Project Manager needs additional and detailed information, in most cases concerned with individual settlers. This includes area of cane planted, fertilizer received, rainfall, crop harvests, production per farm, and number of farm visits by extension workers.

The Project Manager reviews extension activities with the Cane Development Manager on a weekly basis. Harvesting and transport of cane are subjected to daily review by the Project Manager, Cane Development Manager and Field Superintendent. Land clearing activity is also subjected to weekly review by the Project Manager and the Senior Research Officer.

The Monitoring Unit compiles narrative and tabulated reports on physical progress on quarterly and semiannual bases; a financial progress report is furnished half-yearly, and a more extensive report is provided annually. The Project Manager is generally quite aware of the activities taking place. In many cases, he is the supplier of the basic information for the systems.

The information obtained through the system is quite adequate, except for data relating to the settlers' performance and debt situation. The system is designed for the project as a whole. It does not cater to the monitoring of an individual settler's progress. The system has, however, been improved to overcome this deficiency.

A Case Study on Monitoring and Evaluation in the Second Rural Development-Land Settlement Project, The Philippines

Josefina P. Nunez

THE PROJECT

The Government of the Philippines has been vigorously pursuing a policy of land settlement to counter pressures of increasing land scarcity, of encroachment by the landless on public land, and of resettling farm families displaced by various infrastructure development programs. This project aims specifically at accelerating development in the three settlement areas of Agusan, Bukidnon, and Capiz by way of a village road and a small-scale irrigation program; cooperative development and agricultural credit; an agricultural extension, demonstration, and farmer training system; and rural health and family planning services.

The responsibility for implementing the project is with the Central Project Management Unit (CPMU) in the Ministry of Agrarian Reform, and the Area Management Units (AMU) coordinate the activities of the Ministry of Agriculture, Ministry of Local Government and Community Development, Ministry of Public Highways, Ministry of Health, Land Bank of the Philippines, National Irrigation Administration, and others, which provide inputs to the land settlements in the area. The Inter-Agency Project Coordinating Committee (IPCC), composed of representatives of these participating agencies, forms the policy making body.

The direct beneficiaries of the project are the 47,600 families in the three settlements, cultivating a total of 77,000 hectares of land.

The project is for five years, commencing in 1977. The total costs are estimated to be approximately US$33.0 million, of which about half is to be financed by World Bank loans.

MONITORING AND EVALUATION

In this project, monitoring and evaluation is conceived as an integral part of the management organization. It is to provide an effective management information system where problem areas can be pinpointed promptly, performance is evaluated, and bottlenecks are reduced to a minimum.

Organizationally, the Monitoring and Evaluation Division is placed in the Planning and Project Development Office, which is subordinated to the Office of the Project Manager. The Division is headed by the Monitoring and Evaluation Officer, assisted by a Project Evaluation Officer and a Statistical Officer.

The objectives of the monitoring and evaluation system are to facilitate implementation of the integrated project constituents, supervise the annual plans and programs, maintain the data bank on field operations, conduct surveys in the three settlements, and maintain links with other agencies. The system is to monitor project accomplishments and problems, prepare reports, and evaluate project performance. Monthly, quarterly, semiannual, annual, mid-project, and project completion reports are to be produced for the various government agencies.

For all subprojects within the settlement areas, project work plans have to be submitted before funds are allocated; progress must be reported monthly as funding is dependent upon the progress of the project. Subprojects not directly funded by the CPMU are to be reported monthly by the implementing agency. All reports are deposited in a project data bank.

Timely data collection proved to be difficult owing to inadequate access and insufficient enumerators, and some incorrect data have been submitted occasionally. Furthermore, because of constant revision of annual targets, the project performance evaluation is delayed and the frequency of reporting has been reduced to semiannually rather than quarterly as originally intended.

The monitoring and evaluation cost is set at US$406,000 or approximately 1.7% of the total project cost.

A Case Study on the Monitoring and Evaluation System of the Capiz Settlement Project, The Philippines

Pelagio A. Pastor

THE PROJECT

This project is part of the Second Rural Development-Land Settlement Project involving the land settlements of Agusan del Sur and Bukidnon, in addition to Capiz. This settlement, like the other two, was selected for inclusion because it has problems representative of those found in a wider range of areas, has reasonable productive potential for development and is of a sufficient size to warrant a more intensive application of technical, financial, and human resources. It exhibits the mix of more and less productive upland terrain, which is characteristic of settlements in the Philippines, and is at present only slightly above the subsistence farming level in terms of current agronomic practices and standards of living. It would be through the planning and implementation of projects in such an area that an effective settlement program would be developed through a number of changes in the organization and procedures in the Ministry of Agrarian Reform.

The development plan for Capiz Settlement is to be implemented over a period of five years, starting in 1977. The major components for the area include road construction, irrigation and drainage, village water supply and sanitation, land allocation, settlement health services, forestry development, agricultural development for coconut, abaca and rubber, agricultural technical services, and agricultural credit and cooperative development.

To implement the project, the planning units of the Central Project Management Unit (CPMU), the Area Management Unit and the participating agencies would draw up an integrated annual work program and budgetary requirements, which include current operating expenditures and funds for capital outlay. For implementation by operating units in the settlement area, detailed project work plans are prepared for specific projects. These plans are submitted to CPMU for funding upon approval.

MONITORING AND EVALUATION

The objectives of the Monitoring and Evaluation System are to aid project implementation, to evaluate the work progress of the field units and participating agencies and to provide for adjustments in planning, and to evaluate project accomplishments.

Before the inception of the project, baseline surveys were carried out on the basis of a 10% random sample to obtain information on facilities and services available in the area and on land resources. An Interim Project Monitoring System was set up in 1978 to prepare reports on work plans and to develop a monthly reporting system. This has evolved into the present Monitoring and Evaluation System. Data is gathered from the field, summarized, and reported to the CPMU. Project work plans are approved at the area and project level before funding is provided, and the project status reports are submitted by the project supervisor monthly on progress regarding targets, on problems encountered, and on remedial action taken or requested. Monthly progress reports from the Monitoring and Evaluation Unit (MEU) are essentially compiled from the project status reports and provide a complete perspective of the status of project implementation in all aspects of settlement operations. Informal data is also gathered by the MEU staff from personnel involved in the projects, and field inspections are carried out periodically.

Several methods for data and information presentation are used. These include charts, maps, statistical tables, and written narratives. Logbooks are kept on the progress of individual projects. The settlement data bank is a file of settlement information, statistics, reports, relevant records, survey results, and reference materials on settlement development.

A Case Study on the Operation, Monitoring and Evaluation System of the UPRIIS Project, The Philippines

Wilfredo S. Tiangco

THE PROJECT

The Upper Pampanga River Integrated Irrigation Systems (UPRIIS) is the largest multi-purpose infrastructure project of the National Irrigation Administration (NIA). The project is located 170 km north of Manila in the Province of Nueva Ecija. Construction work started in 1971 and was completed six years later. The four irrigation districts cover 104,300 hectares, cultivated by about 45,000 farm households.

The main aim of the project is the provision of irrigation for increasing the cropping intensity to 191% in the service area (96% in the wet season and 95% in the dry season). Irrigation efficiency is to be increased, and the water flow of the Pampanga River is to be controlled to reduce flooding.

The organizational structure integrates the operation and maintenance of all the irrigation systems within the service area. Overall supervision and management is the responsibility of the Operations Manager.

The annual operational budget financed by the National Irrigation Administration is variable, according to requirements for additional and remaining physical works, rehabilitation and expansion of irrigation systems, repairs and improvements of farm facilities, erosion control, reforestation, resettlement and assistance, typhoon damage repairs, and improvements, as well as operation and maintenance.

MONITORING AND EVALUATION

Irrigation plans are drawn up on the basis of water availability, canal structures and capacity, cropping patterns, and the need for maintenance of the irrigation structures. The plan indicates the expected duration of farming activities, area to be irrigated on a weekly basis, and the target flow discharges at all irrigation points.

However, because deviations from the expected targets are considerable, especially through hydro-meteorological variations, a systematic information system on measurement, control, monitoring and evaluation is necessary to be more responsive to the ever changing field conditions, with the aim of better utilization and conservation of the available irrigation water.

During implementation, data are collected daily on the flows of irrigation water at all flow points, rainfall, and local inflows, and weekly accountings of farming activities are made. Complete inventory and analysis of these data and information, with computed corresponding water requirement for each category of farming activities, allow calculations of target discharges for all irrigation points. Data are reported the day after they are collected and transmitted by field telephone and radio communication to the Water Control Coordinating Center (WCCC). Monitoring is performed at the operational, district, zone, division, and section levels. Evaluation of the data is performed weekly by the WCCC as an early warning device. The results are presented in a comprehensive manner and expressed in terms of water duty and irrigation efficiency.

As a result of the introduction of the monitoring and evaluation system, overall performance in terms of area irrigated, cropping intensity, yields and irrigation efficiency, has shown significant improvement but is not yet comparable with the targets set.

The present scheme of field reporting in UPRIIS is the primary constraint in the immediate evaluation of the operational status of the system. There is much still to be desired regarding improvements in communication facilities for transmitting the required data and instructions from and to the field personnel.

The Input-Output Monitoring Program for the Upper Pampanga River Integrated Irrigation Systems (UPRIIS), The Philippines

Rodrigo N. de Guzman

THE PROJECT

The Upper Pampanga River Integrated Irrigation Systems (UPRIIS) is a five-year Agricultural Development Plan, implemented by the National Irrigation Administration (NIA) from 1976 to 1981 after the completion of the physical aspects of the irrigation project. The aim is to increase production in the service area of 83,000 hectares from 2.3 tons per ha to 4.0 tons per ha within the five-year time frame. This is to be achieved through integrated inputs of improved seeds, fertilizers, pesticides, and improved cultivation techniques. The project beneficiaries are approximately 40,000 farm families.

MONITORING, EVALUATION, AND REPORTING

The objectives of the Input-Output Monitoring Program (IOMP) are to create an early warning system to monitor the supply of inputs, detecting shortfalls, informing agencies concerned and devising corrective measures; to monitor productions and other flows; and to make recommendations for additional resource requirements during project implementation. The Agricultural Development Plan is evaluated by comparing the actual flows and the buildup of inputs in the project areas with the planned provisions.

The IOMP was created by the NIA with the assistance of an SGV consultant group whose services will be progressively phased out. Control of the IOMP is under a project leader and a team of technical staff composed of an agricultural specialist, an agricultural engineer, agricultural economists, an agronomist, and a rural sociologist, supported by field enumerators and clerical personnel.

The activities of the IOMP include preliminary familiarization of the project by the team, survey of the project area, review of the five-year development plan, sample farm surveys, and periodic reports.

Based on the information gathered, two kinds of reports are compiled regularly. Situational reports were prepared weekly at the beginning of project monitoring, but the frequency has subsequently been reduced to a fortnightly interval. The purpose of these reports is to provide the early warning of identified problems, which are to be discussed during regular meetings between the NIA and the implementing agencies at the central policy making level and at the Agricultural Development Coordination Council (ADCC), which is the body responsible for implementing the integrated agricultural development project in the service areas. Seasonal reports are more in the nature of ongoing evaluation and are compiled after the completion of different types of surveys and data collection exercises. Analyses are made in the light of deviations

from the program goals and objectives by way of comparing and correlating delivery of inputs, with resulting crop production measured by output monitoring. Data processing is performed with electronic equipment to capture speed and timeliness advantages.

The periodicity of reporting depends on the cropping season, which is largely determined by the irrigation water delivery schedule. At the end of each cropping season, the actual utilization of production inputs and crop yields are reported, along with the success of adoption of designed cropping patterns and recommended farm practices.

Project activities and goals are periodically revised in the light of the survey information, and feedbacks are provided for the project management team. Information is also used by the planners to design the cropping patterns of the succeeding season and to revise the plans in conjunction with the other agencies represented on the ADCC. Reports have helped the coordination at the highest planning level of the National Food and Agriculture Council.

The cost of operating the IOMP for the five-year period is estimated to be approximately US$1.0 million.

A Case Study on the Monitoring and Evaluation System for the Livestock and Poultry Project of the Development Bank of the Philippines

Mario M. Songco

THE PROJECT

The Development Bank of the Philippines (DPB) is responsible for the management of the World Bank-assisted Livestock and Poultry Project, consisting of 872 farm-level sub-borrowers throughout the country. A monitoring and evaluation system was instituted by the DPB in 1979 to provide a continuous flow of project indicators, as well as data for the eventual ex-post evaluation and impact studies, in order to improve credit performance and enhance the benefits of the project.

MONITORING AND EVALUATION

The Monitoring and Evaluation System (MES) is primarily concerned with the effects of credit on outputs, resource utilization, farm income, and the variance between actual project performance and the planned projections. Specifically, the MES is interested in the issues of financial and economic rates of return, technological changes brought about by the project, the effects of external factors (such as prices) on project performance, employment, and other benefits, as well as loan repayment performance characteristics.

The methodology of the MES consists of the selection of critical indicators of project performance, setting up minimum standards of acceptable performance to provide a basis for evaluating the sub-borrowers, and a comparative analysis of the project as a whole. Operationally, the MES is divided into three components. These are the Technical Module, which keeps track of the physical inputs, processes and outputs in livestock and poultry production; the Financial Module, which applies the tools of financial and business management analysis to the technical data base to monitor the profitability and financial viability of the livestock and poultry enterprises under different and varying market conditions; and the Economic Module, which assesses the effect of marketing on productivity, income generation, and loan repayment, evaluates the effects of credit on technological changes in terms of farm management, farm employment, resource utilization and farm income generation, and investigates the relationship between repayment rate according to project types, sizes, and other project attributes.

Sample surveys by means of a questionnaire and continuous farm records are the main instruments of the MES for generating the primary data for the study. A control group for comparative purposes will be included wherever feasible. Sub-borrowers will be stratified for sampling purposes according to farm type, size of loan, and the nature of participation in the credit program.

The data are processed to produce a detailed set of indicators covering the technical, financial, marketing and economic aspects. Statistical methods will be employed for data analysis. However, the lack of an initial baseline survey has hampered a more direct measurement of the impact of the program through direct comparison of the situation before and after project intervention.

A Philippine Experience on an Agricultural Extension Reporting, Monitoring, and Evaluation System

Francisco G. Rentutar

THE PROJECT

The agricultural extension service of the Philippines provides a major link between research institutions and the rural population by disseminating information on improved practices in crop and livestock production, home management, and the building of a self-reliant farming community.

In providing this service to the 14.8 million rural families throughout the country, a number of constraints and problems have been identified recently. These include inadequate pre-service and in-service training of the extension staff, lack of subject-matter specialists, lack of mobility of the field staff, inadequate teaching aids and equipment, confusion brought about by duplication among numerous government agencies engaging in similar activities, time taken in organizing farmers' credit, the neglect of large sections of the farming community, and low salaries paid to field workers.

The overall objective of the National Extension Project (NEP) is to strengthen the extension service and render it more effective in delivery of its services to the rural population by resolving some of the problems and constraints confronting it. The project has five major components: (1) organizational reform through the establishment of a more unified extension service and closer combination between research and extension; (2) provision of facilities and equipment to increase mobility of the field staff for training and administration; (3) improvement of extension methodology by introducing sound extension methods, emphasizing close supervision, regular training of extension workers, and regular farm visits; (4) improvement of staffing and training, particularly for additional subject-matter specialists and livestock extension technicians; and (5) provision for acquiring consultant services for improvement of management, salary review, and procurement procedures and for developing more effective monitoring and evaluation procedures.

The project is funded jointly by the Government of the Philippines and the World Bank in equal proportions for a total amount of US$70.1 million over a period of four years, beginning in 1979.

MONITORING AND EVALUATION

With the organization of the National Extension Project, a separate Planning, Monitoring, and Evaluation Unit was created. The unit has a current staff of five, with the necessary supporting personnel.

The monitoring and evaluation system of the NEP seeks to measure the performance of the field technicians in the various planned programs of the Bureau of Agricultural Extension, against the planned targets. In agricultural food crop production, the system monitors the hectarage covered by each extension worker, the number of farmers assisted, and the production. In the nutrition program, the system follows the growth performance of the targeted infants, the number of infants covered by each health technician, and the number of mothers assisted. These data and other information collected by the system serve as inputs to management planning and control.

For data collection, standardized reporting forms are used. Additional data are obtained through special sample surveys conducted by Central Office specialists and program advisers to cross-check data gathered from the various field reports. Data collected at each level in the organization are processed and analyzed at the next higher level and all processing is performed manually at present, though attempts are being made to mechanize the procedure.

At this initial stage, the unit is still exploring appropriate indicators for determining the effectiveness of individual extension workers under extremely diverse conditions of operation. Because of the geographical distribution of the field offices, the lack of efficient communication facilities is causing some delays in reporting. Some delays are also caused by staff who are not directly appointed by the Bureau.

A Case Study on the Philippine Fourth CB-IBRD Rural Credit Project: Monitoring and Evaluation Aspects

Leopold J. Magpale

THE PROJECT

This rural credit project is the continuation of a series of similar ones started in 1965. These projects were designed to assist the Philippines in raising domestic food production, improving the balance of payments, and raising rural incomes. Under the current project, commencing in 1977, the Central Bank of the Philippines will on-lend a total of US$91.3 million of World Bank loan proceeds and government counterpart funds to 360 Rural Banks (RBs) and 20 Stock Savings and Loan Associations (SSLAs). These qualified banks and credit institutions will in turn finance 16,000 farmers, fishermen, and rural entrepreneurs in investments in farm mechanization, light transport, cottage and agro-industries, coastal and inland fisheries, and small livestock development. The World Bank loan would also provide funds for studies to assess the impact of farm mechanization in the Philippines, for establishment of an Agricultural Machinery Testing and Evaluation Center, for training of personnel, and for acquisitions of service vehicles for the central bank field staff. The project will be completed by the end of 1980.

Implementation of the project is assigned to the Department of Rural Banks and Savings and Loan Association (DRBSLA) of the Central Bank, which has a staff strength of about 650.

MONITORING AND EVALUATION

The first task of the unit under the present project was to review the adequacy of the existing reporting system and to introduce some necessary revisions in the format, routing, and distribution of the reports to reflect changes in project design and related loan covenants.

The perceived indicators of success or failure in the implementation of the project are obtained from the four types of routine reports at monthly or quarterly intervals. These reports include: the Loan Officers Monthly Reports, consolidated by Technical System Evaluation Unit to the Project Director; the Monthly Report of Arrearages on Medium- and Long-term Loans by RBs and SSLAs; the Monthly Status Report on the CB-IBRD Agro-industrial Financing Program to the Monetary Board; and the Quarterly Report of the RBs and SSLAs on the Rural Credit Projects. On the basis of these reports, the unit prepares the quarterly and annual reports indicating the cumulative performance during the period under review by aggregating the data contained in the individual reports of the participating institutions.

Developments, achievements, and problems concerning other project components are based on special ad hoc studies and are reported separately. Project viability is monitored at the farm level, covering significant changes in input and output prices. At the farm level evaluation, the TSEU staff prepares a representative model of the project categories in terms of pro-forma income and expenditure and cash flow projections. Profitability ratios are applied to determine the financial viability of ongoing projects. These occasional field evaluations conducted by the staff complement the more extensive evaluation component of the project, which is subcontracted to a professional research firm.

Supplementary information of a specific nature is obtained from both formal and informal sources regularly or as the need arises. This information is used to confirm the aggregate data being monitored in the regular system.

Currently the DRBSLA management is attempting to consolidate and simplify the various reporting formats, so that the rural banks and savings and loans associations may not be overburdened with numerous and excessive reports to be completed at frequent intervals.

A Proposed Monitoring and Evaluation System for the Rainfed Agriculture Project I (Iloilo), The Philippines

Candido S. Dizon

THE PROJECT

The project aims at increasing agricultural production in the nonirrigated areas of Iloilo Province in the Western Visayas Region of the Philippines. The five major project components are: (1) Agricultural Production Services, with inputs for an agricultural and livestock extension service, seed distribution and quality control facilities, research into multiple cropping, and training of extension staff and farmers; (2) farm credit for dry-land, wet-land and livestock farmers; (3) infrastructure facilities for an efficient agricultural marketing system and small irrigation schemes; (4) social services with facilities for combatting anemia and diarrhea in the area; and (5) project management and administrative support for strengthening of existing institutions at the provincial and national levels.

Field operation is directed by a project manager. A Provincial Development Council, assisted by the Regional Council, will formulate project policy decisions. A Cabinet Coordinating Council determines policy for the National Rainfed Agriculture Program. The secretariat of this council translates these policy decisions into project operational terms and monitors the implementation of the project.

The agricultural development and marketing components of the project will benefit approximately 40,000 small farmers cultivating about 60,000 hectares, including 1,000 farmers who will benefit from the irrigation facilities. The project will begin in 1980 and will be for five years, with a total estimated cost of US$62.4 million, of which about US$11.5 million will be financed by a loan from the World Bank.

MONITORING AND EVALUATION

The objectives of the monitoring and evaluation system are to apply major indicators for measuring the level, pace, and direction of the economic and social impact of the project; to determine progress achieved in overcoming constraints to development; to determine the direct distributive effects of the project; and to provide a data base for inference to the possible effectiveness of the project in other geographical areas.

Routine data and information will be collected on a monthly and quarterly basis to meet the needs for immediate policy decisions. These data relate to the farm economy, crop production, credit and loans, input application, crop varieties, damage and problems, training, research, marketing, and health.

Periodic data collection efforts will concentrate on the farm economy, economic efficiency, and the social impact, with indicators for housing conditions and facilities, food and nutrition, health, education, transport, religion, and culture. This information will be gathered before, during, and after implementation for evaluating the impact of the project.

The monitoring and evaluation will be conducted by an external agency, but the routine data are to be collected by the project farm technicians. The data are then consolidated at the municipal, district, and provincial levels and processed manually at the Project Headquarters. At the central level, the data are analyzed monthly, with the use of computers, to measure project progress. Results are furnished to the various councils involved in management and fed back to the project manager and the participating agencies for follow-up action.

A Proposal for the Design of an Evaluation System for the Second IBRD Rural Development Project in the Philippines

Antonio Perlas

THE PROJECT

The Second Rural Development Project aims to strengthen and support the technical capacity of the Ministry of Agrarian Reform of the Philippine Government, and to test the collective impact of government programs for low-income rural areas. The emphasis of the project is on the better exploitation of the remaining public lands in the country suitable for development as settlement schemes for small farmers. The project area covers the three provinces of Capiz in the Vizayas and of Agusan and Bukidnon in Mindanao.

The project components involve an integrated package of rural infrastructures, agricultural services and credit cooperatives, public health, village water supply, family planning, and institution building for strengthening management capacity and delivery of rural services.

The five-year project will involve costs estimated at US$32.6 million.

THE EVALUATION SYSTEM

The evaluation system aims at assessing the total impact of the project components on the beneficiaries in the three communities. The system is designed to address itself not only to the content via quantifiable indicators, but also to the processes of change and adaptation, the interaction of the people, and the impact of change on the individual and his institutions. Both quantitative and qualitative measures are involved in considering external and internal factors and accounting for formal and informal practices. The evaluation system is seen as an action-oriented management tool, geared toward decision making, with provisions for effecting corrections and improvements during the life of the project. It is recognized that the impact of the various components may not be totally manifest until years after project completion, but by stressing the importance of the human factor the eventual outcome of the project could be assessed.

The structure of the system will be based on the three interrelated foci of Farmer Development, Crop Development and Land Development. These factors and the associated indicators will be investigated by way of both a sample survey and participant observation. The survey will give the study a breadth of coverage, and the observation will render a depth of analysis. The combination of these approaches will give a more complete picture of the situation as it evolves, with changes being instituted by the project. Norms, expressed in terms of selected indicators, will be established to reflect the objectives and goals of the rural development project. The current status of

these indicators will be measured before project commencement and will be compared with the target. These developmental gaps and the necessary course of action to narrow them progressively will then be the priorities for management's decision making. Current work on the design of the evaluation system will determine more precisely the indicators to be used at different levels of development, the project benefit measures, and the relevant human factors.

The evaluation system is to be distinct from the monitoring function, which is a routine in-house activity. Although it was specifically desired by the project manager that the contracted evaluation team should be independent of the project organization to prevent it from being biased, some overlapping activities and information-gathering of the monitoring unit may be utilized by the system to prevent costly duplication.

A Case Study on the Monitoring and Evaluation System for the Agricultural Land Reform Program of Thailand

Suthiporn Chirapanda

THE PROGRAM

The 1975 Agricultural Land Reform Act of Thailand has been designed to improve a situation of high rate of tenancy (approximately 20% of farm households), landlessness, and lack of security for those farmers cultivating public forest reserve land. More specifically, the objectives of the Act were to redistribute land, increase agricultural production, improve credit and marketing facilities, promote farmers' organizations, improve rural environment, and promote education, public health and public utilities, while reducing the income gap between rural and urban population.

Under the provisions of the Act, an Agricultural Land Reform Executive Committee is established, with the Minister of Agriculture and Cooperatives as Chairman. In the Ministry, an Agricultural Land Reform Office (ALRO) administers the program. Areas with serious landlessness, widespread tenancy, and low productivity are designated as Land Reform Areas (LRAs). In 1979 there are 79 such LRAs being included in the program, involving some 300,000 ha of tenanted land and 650,000 ha of public land. Implementation is divided into three separate phases: survey and analysis, land distribution, and development. The ALRO is responsible for land reform preparation and land redistribution, but for developmental activities, the ALRO performs the functions of a coordinating agency.

MONITORING AND EVALUATION

The objectives of the monitoring and evaluation system are to determine the pace of progress of various land reform activities in the context of the overall program, and with respect to their specific targets, to identify major elements responsible for the success or failure of the program, and to make recommendations on implementation.

The activities of the Monitoring and Evaluation Unit include the conducting of benchmark surveys of socioeconomic conditions by random sampling in every LRA and a similar survey in the LRA after five years for comparative study of the changes. Data are also collected from the various implementing agencies, specifically for establishing quantifiable annual targets. The degree of success of the program as a whole is to be measured by the amount of land allocated to the farmers, number of farmers allocated land, distribution of land ownership certificates, and levels of farm and nonfarm incomes.

In the field of land reform, political pressures often play an important role in the decision-making process. Information on land purchase is sometimes delayed and subsequent adjustments of the land acquisition plan may not always be possible. Some basic information (such as the state of tenancy) was occasionally found to be inaccurate and therefore could not be used for decision making. Activities and performance of other agencies in conjunction with various provincial governments are often not available. Despite these shortcomings, the information system has been able to demonstrate that the annual targets are in excess of the capacities and provisions, while the efforts in attempting to achieve the targets have been insufficient and unbalanced.

The Monitoring and Evaluation Unit has a staff of 20 members and an annual operating budget of US$40,000, representing only an extremely small proportion of the annual program cost of US$21.1 million as of 1978.

A Report on the Monitoring of the Phitsanulok Irrigation Project, Thailand

Judha Krishnamra

THE PROJECT

The Phitsanulok Project is a major irrigation development effort in Thailand. Apart from providing irrigation facilities for 16,000 agricultural holdings, with a total cultivated area of 50,000 hectares, the project also includes the establishment of five demonstration farms as focal points for dissemination of modern farming techniques through a project-based extension service. There will also be a pilot project for land consolidation.

The implementing agency is the Royal Irrigation Department, which appoints from its staff the Project Director and the Project Manager. Project management is responsible for coordinating the activities of irrigation, extension, and land consolidation, undertaken by various participating agencies.

PROJECT MONITORING AND MANAGEMENT ANALYSIS

The monitoring activities are the responsibility of the Economic Analysis and Land Policy Subdivision of the Land Development Department. The Monitoring Unit is subordinate to the Project Coordinator and works closely with the Project Director. The unit has separate sections responsible for data collection, analysis, and information presentation.

The aims of project monitoring are to conduct an agroeconomic baseline survey, to assess the socioeconomic impact of changes in land tenure and agricultural activities, to evaluate the progress of the project in relation to targets set in the appraisal, and to identify problems encountered in the coordination between the irrigation engineering and agricultural development components.

A baseline survey was conducted 1976/77, attempting to solicit farm level information on socioeconomic background of the farm households, occupational characteristics, marketing of farm produce, loans and credit, attitude toward the project, and other social characteristics, including nutrition, health, and exposure to mass media. A multi-stage stratified random sampling technique was employed. The basis for stratification was the proximity of the farm households to the operation foci of demonstration farms and the land consolidation pilot project. The total sample size was 1,980 farm households, with 10% being in the control group residing outside the project area. Thirty-two people were involved in the baseline study.

The bulk of the work was performed by the staff of the Department of Land Development. Consultants were engaged for providing inputs to planning and design, data processing and analysis, computer programming, and reporting.

Apart from being responsible for assessing and feeding back the appropriate information related to project accomplishments, the Monitoring Unit is also concerned with analyzing administrative problems of coordination among the participating agencies that might deter efficiency in project performance. Since management analysis is considered a sensitive issue it was decided that an independent agency outside the project management (the National Institute of Development Administration) should be invited to perform the task. When the analysis has become a routine procedure and accepted by the parties concerned as being constructive, the unit will handle further follow-up studies.

At present, some staff positions in the unit, particularly in the vital area of the Information and Presentation Subunit, remain vacant, awaiting the recruitment of personnel of sufficiently high caliber to perform the task. Furthermore, a feedback system between the unit and the operational field units from the Irrigation, Land and Extension Departments and the Provincial Committees has yet to be established.

A Case Study on the Monitoring and Evaluation of the North Kelantan Rural Development Project, Malaysia

Zaharudin bin Jaafar

THE PROJECT

The North Kelantan Rural Development Project aims at improving the productivity and income of the rural population, narrowing the urban-rural income disparities, and reducing national dependency on imported food-grains. These objectives are to be achieved through the provision of some small-scale irrigation facilities, improvement of irrigation service standards on some existing projects, construction of some rural roads, establishment and upgrading of a number of Farmer Development Centers from which farmers could obtain the essential farm inputs on preferential terms, and strengthening of the agricultural extension service.

Implementation of the project involves several agencies, under the coordination of the Ministry of Agriculture. The overall development policy is the responsibility of the Steering Committee, on which the participating agencies are represented. The Project Manager has a staff of 155, including 134 agricultural extension workers. Besides being directly responsible for the agricultural components, he has to coordinate the project activities of the Drainage and Irrigation Department, the Public Works Department, the Farmers' Organization and the Kemen Agricultural Development Authority. The Project Office is composed of the three sectors of Administration, Publicity, and Monitoring and Evaluation.

The project, commencing in 1977, will cover a five-year period, with a total cost of US$48.0 million, of which 44% is financed by a World Bank loan. The target population includes approximately 108,000 poorer farm families in six districts.

MONITORING AND EVALUATION

The monitoring and evaluation function is targeted to record the financial and physical progress of the various components of the project to ensure that project activities are integrated with and complementary to each other. Project outputs, effects, and impact are to be measured against the planned targets. The measurement of changes in farm productivity and household income will provide the basis for evaluating the success of the project as a whole.

The envisaged activities of the Monitoring and Evaluation Section include the integration of regular reports from the various implementing agencies concerning physical and financial progress for the Steering Committee and the World Bank on a quarterly basis; the conducting of a base-line survey in all districts within the project area and an annual sample survey to take stock of the changing farm situation and income status; and the undertaking of special sample surveys to determine the changing attitude of the farmers and the performance of the extension scheme. To monitor the project effects, it is proposed that the crop cutting surveys of the Statistics Department should be extended to cover the entire project area.

The Monitoring and Evaluation Section was only established in 1978, two years after the inception of the project. Presently, it has a staff of six, including field enumerators. The Section has an annual budget allocation of less than US$10,000, which is considered grossly inadequate for all the activities it has to perform.

Apart from budgetary and staffing problems, the Monitoring and Evaluation Section has also encountered difficulties in the uneven supply of information by the various coordinating agencies, on the basis of which the reports are compiled. The lack of decision-making authority of the project management has also detracted from the effectiveness of monitoring and evaluation.

A Preliminary Proposal for a Monitoring and Evaluation System for the National Extension Project in Malaysia

Chan Ah Kiow

THE PROJECT

The National Extension Project (NEP) is the second phase of the Malaysian Government's strategy in strengthening the agricultural extension service and has been built upon the foundation of the activities of the forerunner Extension Liaison Unit, which bridged the gap between research findings and known technology, on the one hand, and adoption of improved practices by farmers, on the other.

The objectives of the NEP include the improvement of agricultural productivity and increase in income of the poorest segment of Malaysian society; the reduction in urban-rural and ethnic income disparities; and the reduction of national dependency on imported food grains.

The project aims at increasing the numbers of agricultural technicians involved in the training and visit system of extension; establishing four regional Extension Training and Development Centers for in-service training of field staff; and producing as well as distributing improved seeds for paddy and minor crops. Construction of new buildings, purchase of vehicles and equipment, and provision of consultancies and fellowships are also included in the project.

The training and seed components of the project would be implemented by the Extension Branch and the Crop Production Branch in the Department of Agriculture. Each component would be headed by a project leader administratively responsible to the Project Director. At the state level, the project is coordinated through the State Directors of Agriculture.

This five-year project began in 1979 and the total project cost is estimated at US$46.5 million, of which 41% would be supported by a World Bank loan.

MONITORING AND EVALUATION

The monitoring and evaluation system of the project is designed as a tool for decision making and as a continuous process of problem definition, measurement, analysis, and assessment. The system would therefore primarily be concerned with the efficient implementation and evaluation of project effects and impact.

The project would rely on monitoring to provide timely information concerning the quantity, quality, costs, and timing of inputs and activities, and the immediate outputs of the project. Ongoing evaluation aims at providing information for making adjustments in the basic premises, objectives and

design of the project, while ex-post evaluation will review comprehensively the experience gained and impact that has been achieved to serve as a basis for a future policy formulation and project design.

The system applies the methodology of the logical framework as a tool for monitoring and evaluation. Nine key indicators have been identified for monitoring the training and visit system of extension, and a further seven key indicators are to be used for evaluation. Means of verification of the indicators include the use of personal field observations, extension service records, government local purchase orders and official receipts of payment, ad hoc studies, and farm surveys. A baseline survey before the effects of the project begin to manifest themselves and continuous assessment of changes brought about during and after the implementation period will also be conducted. The Chief Extension Officer of each state would be required to furnish a quarterly report in a standard format pertaining to staffing and to physical and financial progress, as well as problems and key issues. As approval for the establishment of the evaluation unit is still being sought, cost estimates remain unavailable.

A Case Study on Monitoring and Evaluation in the Yogyakarta Rural Development Project, Indonesia

Samirin

THE PROJECT

This multi-component rural development project aims at reducing the extreme poverty among 12 million people in the two poorest districts of Gunung Kidul and Kulon Progo in Yogyakarta. The project deals with appropriate technology for increasing agricultural production for hillside farming at various stages of land degradation. Also included in the project are provision for small-scale industrial promotion, improvement of credit facilities, rural water supply, road construction, health care and rural institutional development through training and encouragement of local initiatives in developmental activities.

A major goal of the project is to assist the Government of Indonesia to decentralize planning by assisting the shift of major responsibility for planning and executing projects to the provincial level, with the strengthening of the Provincial Development Planning Board (BAPPEDA). A major long-term benefit of the project will be the identification of relevant development packages which could be duplicated throughout the country.

Individual components are to be implemented by specific line-agencies, and a Project Coordination Unit has been established to ensure that the project is to be executed in an integrated manner according to design. The management team of six includes a Monitoring Officer and a Project Evaluation Officer.

MONITORING AND EVALUATION

Monitoring and evaluation play a vital part in the management process. The Monitoring Officer maintains a close liaison with each component manager and reports to the Project Coordinator on the physical progress of complementary components undertaken by the different participating agencies. He also assists the coordinator in preparing the consolidated quarterly physical progress reports and seeks methods of solving problems encountered during project implementation. The Evaluation Officer prepares requests for submission of project evaluation proposals by agencies concerned and reviews the proposals submitted. He is also responsible for supervising the agencies contracted to evaluate the project, particularly for the health and drinking water components. In addition, he makes annual reports on the impact of the project, based both on the evaluation reports and on personal field observations. He is to evaluate the physical progress and financial costs of the various project components and to prepare recommendations to expedite project schedules and to keep costs within reasonable limits.

The consolidated Quarterly Evaluation Reports containing details on physical progress, budgets, costs, organization problems, and recommendations are reviewed by the head of the Coordination Unit and approved by the Chairman of BAPPEDA. Copies are forwarded to the Governor, the Bupati, the Dinas of the implementing agencies, the Department of Home Affairs, the Department of Finance, Bank Rakyat Indonesia, and the World Bank. Through this process, follow-up activities and management decisions will be formulated.

As the Coordinated Unit started functioning only a few months previously, the systems and procedures for administration, project management, finance, monitoring and evaluation are still being formulated.

Aspects of Monitoring and Evaluation of the Southern Highlands Project, Papua New Guinea

John Wallis

THE PROJECT

The Southern Highlands Province, with a population of 235,000 (90% in subsistence agriculture), is a backward area in Papua New Guinea. In line with the National Development Strategy, the general aims in development of the province include the acquisition of revenue thorugh participation in business enterprises, the spread of the commercial sector, the provision of wage-labor employment, the raising of productivity in the subsistence farming sector, the strengthening of agricultural extension, the improvement of the health program, the increase in educational opportunities, the promotion of nonformal education, the use of appropriate technology for basic needs, and the improvement of the road system.

The Southern Highlands Project has several interrelated components covering the fields of agricultural development, health facilities, education, and basic infrastructure. Under this project, research into a relevant type of agriculture suitable for the area would be promoted. Provisions for a crop development program involve the establishment of land blocks and export processing facilities for tea, cardamon, coffee and silk. Accessibility to health services would be improved by creating more Health Subcenters; the health services would be strengthened by a program of training to increase staff quality and motivation. Information on disease patterns, particularly pneumonia, will be collected and analyzed. Epidemological studies are being conducted. Through both formal and nonformal education, literacy and ability to use appropriate technology at the village level would be increased. Electricity is provided for the tea and coffee processing factories and various types of roads are being constructed to improve communication.

The project, commenced in 1978, is for six years. The total project cost is estimated to be approximately US$20.00 million, and the International Development Association (IDA) will reimburse about 64% of the project costs.

MONITORING AND EVALUATION

In view of the limitation of project funds, compared with the funds for a diverse number of subprojects and possible alternative approaches among the project components, a strong selection of subprojects for funding can be made. The system must be mutually compatible among the three end-users: the Provincial and National Governments and the IDA. Some key indicators and criteria have already been chosen at the national government level.

A major objective of the project itself, particularly pertaining to the Agricultural Field Trials, Studies, Extension and Monitoring Unit (AFTSEMU) and the Epidemology Unit (EU), is to establish a system of data collection and monitoring for ongoing use by the province. It is recognized that a significant amount of the information required for establishing effective data and monitoring systems is common to all the three levels of potential users: project, provincial, and national. Effort is being directed to ensure that information collected by one user is compatible with the analysis systems of the others, and costly duplication is to be avoided.

Indicators for the specific needs of monitoring the progress and impact of each component are being developed. Additional inputs to the monitoring system include accounting records, loan surveillance reports of the Development Bank, and a wide range of regular reports to different levels of government.

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